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roblems of Economics

Selected Articles from Soviet Economics Journals in English Translation

IN THIS ISSUE

A. Aleshina and Ia. Kabachnik: Some Results of an Experimental Survey of Worker Family Budgets (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12)

V. Vasil'eva: Improvement in Living Conditions (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12)

E. Rusanov: Allocation and Utilization of the Soviet Labor Force During the Seven-Year Plan (Sotsialisticheskii Trud, 1961, No. 3)

A. Kazanskii and A. Ul'ianova: A Great Social Achievement (On the Results of the Transfer of Factory Workers and Office Employees of the USSR to a Shorter Working Day) (Vestnik Statistiki, 1961, No. 5)

V. Kudrov: Anti-Scientific Methods Employed by Bourgeois Economists to Compare the National Incomes of the USSR and the US (Voprosy Ekonomiki, 1961, No. 2)

P. Oldak: Toward a Critique of the Modern Keynesian Concept of the Business Cycle (Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia, 1960, No. 3)

A. Katz: The Labor Aristocracy in the United States of America (Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia, 1960, No. 7)

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Problems of Economics

TABLE OF CONTENTS

l. IV, No. 4 August 1961

BUDGET STUDIES

ALESHINA and Ia. KABACHNIK: Some Results of an Experimental Survey of Worker Family Budgets (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12) 3

KUZNETSOVA: Changes in the Level of Food Consumption (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12) 8

VASIL'EVA: Improvement in Living Conditions (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12) 12

BALASHOVA: A Higher Cultural Level (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12) 14

NEMCHINOVA: Changes in the Composition and Size of Worker Families (Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia Plata, 1960, No. 12) 18

LABOR FORCE, LABOR PRODUCTIVITY, WORKING CONDITIONS

RUSANOV: Allocation and Utilization of the Soviet Labor Force During the Seven-Year Plan (Sotsialisticheskii Trud, 1961, No. 3) 23

KAZANSKII and A. UL'IANOVA: A Great Social Achievement (On the Results of the Transfer of Factory Workers and Office Employees of the USSR to a Shorter Working Day) (Vestnik Statistiki, 1961, No. 5) 28

COMPARISONS OF SOVIET AND US ECONOMIES

KUDROV: Anti-Scientific Methods Employed by Bourgeois Economists to Compare the National Incomes of the USSR and the US (Voprosy Ekonomiki, 1961, No. 2) 37

WESTERN ECONOMIES AND ECONOMIC THOUGHT

OLDAK: Toward a Critique of the Modern Keynesian Concept of the Business Cycle (Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia, 1960, No. 3) 43

KATZ: The Labor Aristocracy in the United States of America (Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia, 1960, No. 7) 53

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Selected Articles from Soviet Economics Journals in English Translation

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BUDGET STUDIES

Biulleten' Nauchnoi Informatsii. Trud i Zarabotnaia
Plata, 1960, No. 12

ALESHINA AND Ia. KABACHNIK:

ome Results of an Experimental Survey of Worker Family Budgets

In March of 1959 the Institute of Labor surveyed e budgets of 100 worker families in three major in- strial centers — Moscow, Gorkii and Ivanovo. ese 100 families, along with 3,900 other families, re systematically surveyed by the All-Union Cen- l Council of Trade Unions between 1951 and 1956.

Although the number of families studied was rela- ely small, the Institute's work is of definite inter- .

Analysis of the data indicated that even this ited number of budgets reflects the characteris- features and tendencies distinguishing the budgets workers in the USSR.

The Institute's survey made it possible to study budget dynamics of the same group of families er a rather protracted period — eight years (1951- 59).

To obtain the most typical and characteristic data analyzing the budget figures, the families of pen- ners and single persons, whose budgets differ mewhat from the budgets of workers with families re excluded. The number of budgets studied was s reduced to 92.

To facilitate comparison, and because the 1959 vey was conducted in March, the budgets for rch 1951, March 1956 and March 1959 were used.

The analysis employed the following classifica- ns: cities (Moscow, Gorkii and Ivanovo); branches industry (ferrous metals, machine construction, emical and textile); and average monthly income member of family (400 rubles, between 401 and rubles, and over 700 rubles).

The rise in the material and cultural level of the rker families is assured by the increased wages eived by the head of family and its members, on one hand, and by various kinds of allowances and pends, as well as services rendered without rge or at a discount by the state or by public or- izations, notably the trade unions, on the other d. It was not possible to calculate the value of se services for all the budgets under survey, and refore the incomes of the worker families are newhat understated.

A general index of the rise in the welfare level of the families surveyed is the increased money income per family. The average money income increased from 1,585 rubles in March 1951 to 1,772 rubles in March 1956 (by 11.8%) and to 2,063 rubles in March 1959 (by 30.2%).

The rate of growth of family incomes is clearly accelerating. While in 1951-1956 the average annual increase was 2.3%, in 1956-1959 it was 5.2%. In other words, the rate of growth in the latter years increased by two-thirds.

This increase in the incomes of the families, in a situation of stable and systematically reduced state retail prices for foodstuffs and manufactured goods is a very important factor in the rise of their welfare.

Money income per member of family increased even more.

The size of those families whose head was middle-aged in 1951 decreased in the eight year period. The adult children left their families and founded independent ones. This affected the average size of the families, reducing it from 4.14 members in 1951 to 4.09 in 1956 and to only 3.87 in 1959. (1) Taking this change into account, the average money income per member of family increased from 383 rubles in 1951 to 433 in 1956 and to 533 in 1959. In other words, the average annual increase in income per member of family was 3.3% in 1951-1956 and 7% in 1956-1959.

The increase in income per member of family between 1951 and 1959 and the levelling out of these incomes are shown in Table 1 on the following page.

The increase in incomes for 1951-1959 sent a number of families of the lower income category into the middle income group and a number from the latter category into the high income group. The proportion of families with per capita incomes below 400 rubles in March 1951 was 50%; by March of 1959 it had decreased more than three-fold. The number of families with average per capita incomes ranging from 401 to 700 rubles increased

Table 1

Distribution of 92 Families by Level of Average Income Per Member

Average income per member* (actually received in rubles)	Number of Families			% of Total		
	March 1951	March 1956	March 1959	March 1951	March 1956	March 1959
Below 400	46	40	15	50.0	43.5	16.3
401-700	35	37	57	38.1	40.2	62.0
Above 700	11	15	20	11.9	16.3	21.7
Total	92	92	92	100	100	100

* It is here assumed that families with per capita monthly incomes of less than 400 rubles are relatively low-income (only relatively because per capita income of 300-400 rubles is by no means low), families with per capita income of 400-700 rubles a month are (relatively) middle-income, and families with per capita income above 700 rubles are high-income.

proportionally more than 50%, and became dominant. And the number of families with per capita incomes above 600 rubles increased to 21.7% of the total.

The levelling out of the family incomes is expressed first of all in the fact that the majority of families surveyed in 1959 (62%) fell into the middle income group. It is also significant that the middle income group expanded at the expense of the low income group.

The main source of a family's income is the wages earned by its head and members. The total sum of average wages received by the families increases from year to year, and increased 41.8% between 1951 and 1959. And although the average wages of the heads of family rose considerably (22.4%), they grew much less than those of the other members (92.8%). The share of the wages earned by the members of the family (apart from the chief bread-winner) increased from 27.5% of the total in March 1951 to 37.5% in March 1959, and from approximately one-fourth to one-third of the family's total income. The share of the head of family is gradually decreasing -- in March 1959 it was less than 50% of the total.

This is explained by the increase in the number of working members, and by the growth of their skills and, consequently, their wages. What is involved here, to a certain extent, is the natural process of the "aging" of the family (children grow up and go to work) and the characteristic tendency of our society to draw housewives into production. The latter phenomenon is a direct consequence of the increas in the number of kindergartens and day nurseries, improvement of retail trade and public services, etc.

Wages are the main source of income of the fam lies, but there are others.

The structure of their total incomes is shown i Table 2 on the top of the following page.

These figures show that the proportion of wages in the families' total income is growing steadily. Prior to 1956, the year when the new pension system was introduced, the rise in pensions and othe money benefits was somewhat slower than that of income as a whole. This is the reason for the decrease in the proportion of social insurance benef pensions and other allowances in the sum total of the incomes of the families surveyed (from 5.8% 1951 to 4.8% in 1956). By March 1959 this gap wa more than filled despite the substantial increase total family income.

Improvement of state retail trade and the increasing number of family members employed in state enterprises make working household plots quite unprofitable. Therefore the latter's total i come decreased from 3.5% in March 1951 to 1.8% in March 1959.

The proportion of money income from household plots in total income differs considerably fr city to city. (See Table 3 shown on the following page.)

In March 1951 household plots accounted in

Table 2

Proportion of Various Types of Income in the Total Income of the 92 Families Surveyed*

Type of Income	March 1951	March 1956	March 1959
Wages of the head of family	52.7	50.9	49.6
Wages of other members of the family	20.0	28.3	29.7
Total wages	72.7	79.2	79.3
Bonuses	1.0	1.5	0.9
Social insurance benefits, pensions, stipends, etc.	5.8	4.8	6.2
Income from household plots	3.5	2.4	1.8
Other income (loans)	17.0	12.0	11.1
Total wages	100	100	100

* Excluding the services rendered by the state to the families without charge or at a discount.

Table 3

oportion of Money Income from Household Plots in the Total Income of the Families Surveyed (as a % of total family income taken as 100)

City	March 1951	March 1956	March 1959
Moscow	1.7	1.3	0.8
Gorkii	6.2	4.2	2.0
Ivanovo	4.2	2.9	3.0

kii for 6.2% of total income and in Ivanovo for
%. In March 1959 the proportion remained suffi-
nt only in Ivanovo — 3%. This depends on the or-
ization of state trade in foodstuffs, on the level of
ges and certain other factors.
espite the general increase in the sum total of
ily incomes, there were certain differences in
income levels of the families in the three cities
n Moscow incomes were somewhat higher than
orkii and Ivanovo.
hese differences are due chiefly to the differ-
es in wages in different branches of industry (in
scow the heads and members of families work in
machine-building and ferrous metals industries, in Gorkii — in the machine-building and chemical industries, in Ivanovo — in the textiles industry).

The average incomes of the families in the different cities levelled out considerably between 1951 and 1959. If we take the incomes of the Moscow families at 100, those in Gorkii and Ivanovo were as follows:

	March 1951	March 1956	March 1959
Gorkii	77.8	78.4	90.3
Ivanovo	—	72.1	89.5

The levelling out of family incomes is promoted primarily by the measures taken by the Soviet Government to regulate wages, to raise wages in the lower-paid brackets, to eliminate extravagance in the wage system, to extend services rendered without charge or at a discount, and to ensure the all-round development of the country's economic districts.

Of major interest is the analysis of the changes in the expenditure part of the family budgets. (See Table 4 shown on the following page.)

Expenses have risen most in the case of cultural needs. (2) While in March 1956 they were 59.4%

Table 4

Changes in Expenditures on Various Items

(in the average family, as a % of March 1951 taken as 100)

Items	March 1956	March 1959
Total sum of family expenses	111.8	130.2
Of which:		
Housing, fuel, public utilities	102.2	132.4
Food	109.0	133.0
Manufactured goods (including furniture and household goods)	111.6	154.9
Culture and education	159.4	209.2
Hygiene and sanitation	115.1	137.7

above the March 1951 figure, in March 1959 they had already doubled. This rate of growth is illustrative of the constant rise of the Soviet people's cultural level. The increase in expenses for the purchase of manufactured goods, especially durable goods, is quite characteristic of the rising living standard. Analysis of the budget figures shows that these expenses rose especially after 1956. Expenses for the purchase of manufactured goods in March 1956 were 11.6% above March 1951, and in March 1959 they were 54.9% over the 1951 figure.

Expenses on hygiene and sanitation also rose considerably — 15.1% by March 1956 and 37.7% by March 1959. They include chiefly purchases of soap, cologne and other items, as well as barbershop, bathhouse, laundry and other expenses.

The growth of welfare standards is indicated by analysis of food expenditures. In 1959 they were on average 33% above the March 1951 figure. Thi was connected with an increase in the volume and consumption of the more highly priced foodstuffs, particularly animal products. (3) The increase in total food expenses (accompanied by a decrease in their total expenditures) occurred in a period marked by repeated reductions of state retail pric for foodstuffs. Food expenses in many of the families are approaching a level which will essentially ensure physiologically sufficient nourishment, notably for such products as sugar, fats and fish.

This enables the families to spend more of thei growing incomes on clothing, footwear, durable goods (radio and television sets, furniture, etc.) and to satisfy more fully their growing cultural needs.

Expenditures on rents in March 1956 were at th 1951 level, but rose somewhat (by almost one third) by March 1959. This was mainly due to the mass movement of families into new, bigger apartments with greater conveniences and, therefore,

Table 5

Structure of the Expenses of the 92 Families Surveyed

(in % of total)

Item	March 1951	March 1956	March 1959
Housing, fuel, public utilities (minus repairs and new construction)	4.4	4.0	4.4
Food (including public catering establishments and children's institutions)	51.8	50.7	49.1
Clothing, footwear, furniture and household goods	18.0	17.9	21.9
Culture (cinemas, theatres, newspapers, magazines and books)	1.5	2.2	2.5
Hygiene and sanitation	2.2	2.2	2.3
Tobacco	0.9	0.9	0.9
Membership dues in public organizations	1.3	1.0	1.0
Taxes	6.1	6.7	6.3
Other expenses	13.8	14.4	11.6
Total	100	100	100

th somewhat higher rents and public utility
arges. (4)

The proportion of rents in the eight years under
view remained stable in relation to total expenses
4 to 4.4%, while the quality of housing (living
ace per person, public conveniences, etc.) im-
oved considerably.

The proportion of food expenses in the same peri-
l decreased (by 1.7%), while the proportion of ex-
nses on clothing, footwear, furniture and other
usehold goods rose by 2.9%. The proportion of ex-
nses on cultural needs went up substantially (by
o-thirds in the eight years).

One item — subscription to state loans — disap-
ared completely from the expense budget. Taxes
d deductions from wages increased in conformity
th the rise of income.

The quantitative and qualitative changes in the
ructure of the expenses of the families surveyed
e expressive of the growth of their material and
ltural levels.

Expenditures for various items in families with
fferent incomes have not undergone the same
anges.

Table 6 below shows these changes in respect to
milies with different per capita average incomes
1959.

The middle and high-income families increased
eir expenditures on manufactured goods (clothing,
otwear, furniture, etc.) to a much greater degree
an those in the lower-income bracket. In this con-
ction, it should be remembered that a large num-
r of families moved into the higher-income
acket and that the proportion of lower-income
milies decreased. The increase of food expenses in the group with per capita average incomes below 400 rubles (19%) was considerably greater than the increase of expenses on manufactured goods (7%). The families in this bracket first improve their nutrition. In the middle-income bracket (401 to 700 rubles per capita) the increase in expenses for food and manufactured goods was about the same — 25 and 32% respectively.

Further adjustment of wages and the abolition of taxes will lead in the near future to a more significant increase in the purchase of manufactured goods by the relatively low-income families.

Expenditures on cultural needs, sanitation and hygiene tend to level out in all the groups.

Analysis of the budgets of the families in the different cities (Moscow, Gorkii and Ivanovo) indicates that the structure of the expense budget is increasingly levelling out and is gradually approaching the Moscow-type budget.

The results of the Institute of Labor survey on such basic questions as qualitative changes in the level and structure of food consumption, improvement of housing, rise of the cultural level and changes in the composition and size of worker families in Moscow, Gorkii and Ivanovo are analyzed in greater detail below.

Table 6

Changes in the Expenses of the 92 Families in March 1959
(1951 = 100)

Items	Families with per capita average incomes in rubles		
	Below 400	401-700	Above 700
Food (including public catering establishments and children's institutions)	119.0	125.4	132.0
Clothing, footwear, furniture and household goods	107.3	116.6	209.0
Culture and education	441.3	240.2	131.6
Hygiene and sanitation	165.9	141.3	115.4

Footnotes

(1) For details concerning the changes in the composition of the families, see I. Nemchinova's article below.

(2) See M. Balashova's article below.

(3) See N. Kuznetsova's article below.

(4) See V. Vasilieva's article below.

Biulleten' Nauchnoi Informatsii. Trud i Zarabotnai
Plata, 1960, No. 1

N. KUZNETSOVA:

Changes in the Level of Food Consumption

One of the most important indices of the Soviet people's growing level of welfare is the steady change in the level and structure of food consumption.

Some interesting data on this change emerge from analysis of the budgets of the 92 families surveyed in 1951-1959.

As already shown, (1) the total spent by the families on food increased by 33% in 1951-1959, while the proportion of food expenses in total expenditure decreased on average from 52 to 49%. (2)

Analysis of food expenses among families with different per capita incomes reveals the following pattern: the higher the income, the smaller the proportion of food expenses in the sum total. For instance, in the group of families with per capita incomes of 700 rubles and more, it does not exceed 40%.

Growth of the absolute sum of food expenses when accompanied by repeated reductions in prices indicates that the families were buying more of better and dearer foodstuffs. The decrease in the proportion of food expenses is explained by the fact that the families began to satisfy their food requirements relatively fully and can now afford to spend more money on the purchase of manufactured goods and the satisfaction of their cultural needs. The growth of the budget thus outpaces the increase in food expenses, and that is a sign of the families' growing welfare.

Let us see how food consumption changed between 1951 and 1959 in the families surveyed. (See Table 1).

The table shows that consumption of rye bread and flour and potatoes on the whole decreased in 1951-1959 and that consumption of fruit, milk and dairy products, butter, meat and meat products and fish increased substantially.

Analysis of the budgets reveals that in the case of certain items the increase in consumption between 1951 and 1959 was uneven in the families surveyed in Moscow, Gorkii and Ivanovo.

In the case of butter, for instance, in which the average increase in consumption was 1.8 times, the biggest increment was recorded in the families of Gorkii (2.2 times) and the smallest (1.5 times) in Ivanovo.

Table 1

Increase in Food Consumption of the 92 Families in 1951-1959
(per adult member of family)

Items	Consumed in 1959 in % of 1951
Rye bread and flour (calculated in bread)	69.9
Wheat bread and flour (calculated in bread)	111.2
Potatoes	88.8
Cabbage and other vegetables	132.3
Fresh fruit	441.2
Milk and dairy products (calculated in milk, butter excluded)	140.6
Butter	179.5
Vegetable oil and margarine	159.8
Meat	149.7
Sausage and smoked foods	187.1
Fish	191.8
Sugar and confectioneries	138.6

For dairy products the general increase was 1.4 times, the increase in Gorkii was almost two-fold, in Moscow it was 31% and in Ivanovo it was 23%.

Consumption of fresh fruit increased 8.2 times i Ivanovo, 4.4 times in Gorkii and three-fold in Moscow.

Meat consumption in the three cities increased by approximately the same amount.

Consumption of rye bread and flour decreased i all the families surveyed by 30.1%, in the case of the families in Gorkii by almost two-fold and for those in Ivanovo by 21%.

This can be explained by the increase in the consumption of wheat bread and flour.

The decrease in the consumption of rye and whe bread in the Moscow families is explained by a substantial increase in the consumption of other, higher-calorie foods.

The decrease in potato consumption in all three ties is also due to its being replaced to some exnt by more nourishing foodstuffs.

Despite the growth of food consumption in the milies surveyed in the three cities, there are still rtain differences in nutrition. This can be exained first of all by the income levels of families orking in different branches of industry (metallurgy d machine-building in Moscow and textile in Ivano).

Moreover, each of these branches has certan prossions that differ from each other with respect to aviness of labor. Therefore, the restoration of e energy expended in any concrete case can be enred by a different amount of foodstuffs containing e necessary quantity of proteins, fats, carbohyates, mineral salts and vitamins.

The differences in nutrition are to a definite exnt also influenced by the organization of the supply stem in these three cities.

Analysis of the data shows that the level of food nsumption in Moscow is somewhat higher and the et better than in Gorkii and Ivanovo.

The families surveyed in Moscow, for instance, nsume more meat and meat products, butter, fruit d sugar than the families in Gorkii and Ivanovo, d less bread and potatoes. It should be pointed out, wever, that the difference in the consumption of sic foodstuffs in the cities surveyed decreased subantially between 1951 and 1959. The difference has actically disappeared with respect to milk.

If daily consumption of foodstuffs in the families Moscow is taken at 100 (per adult member of mily, consumption by the families in Gorkii and anovo will be as follows:

Table 2

Food Consumption per Adult Member of Family

Item	Year (March)	Gorkii	Ivanovo
Meat	1951	76.9	71.8
	1959	78.4	76.2
Fresh fruit	1951	27.5	34.9
	1959	40.3	93.9
Fish	1951	76.0	102.9*
	1959	84.4	97.3
Milk	1951	64.8	113.9
	1959	93.8	139.9
Wheat bread	1951	91.3	68.9
	1959	142.8	110.3

Consumption of fish was somewhat higher in 1951 due to herring consumption.

Of major interest is the analysis of food consumption from the point of view of per capita average income.

Study of the diets in groups of families with different per capita incomes shows that the first thing that increases with the rise of per capita income is the consumption of butter, meat, eggs and fresh fruit.

It should be pointed out that a considerable difference in food consumption is noticeable only between the groups of families with per capita incomes of below 400 rubles and those ranging from 401 to 700 rubles.

The difference between the families with per capita incomes ranging from 401 to 700 rubles and those above 700 rubles is already less substantial.

For instance, in the case of such an important item as meat there is practically no difference in consumption. But families with per capita incomes of more than 600 rubles consume more dairy products: butter — 20%, milk products — 33% (due to increased consumption of cheese, sour cream and cottage cheese).

The most noticeable difference is in the consumption of fruit. The families with per capita incomes of more than 700 rubles consume twice as much fruit and 36% more vegetables than the families with per capita incomes ranging from 401 to 700 rubles.

An important general index for determining changes in the level of nutrition is the data on the chemical and caloric content of foodstuffs.

The Institute of Nutrition of the USSR Academy of Medical Sciences has worked out scientifically based physiological norms of nutrition. The physiological norm stipulates the best conditions for the all-round development of the organism and its vital activity.

The organism's food requirements depend on the nature of the person's work, place of residence, sex and age. For people doing heavy physical work food content should be such as to give the organism at least 4,500 calories a day, for persons doing mechanized and moderately heavy physical work — about 4,000 calories, for people doing mechanized work — 3,500 calories, for people doing mental work — 3,000 calories, etc. The average per capita figure should be slightly over 3,000 calories.

The improvement in the quality of nutrition in the families surveyed between 1951 and 1959 found expression in the change of the chemical and caloric content of the foodstuffs consumed. In March 1959, as compared with March 1951, the amount of nutritious substances in the daily diet per adult member of the families surveyed was: proteins — 10.5% higher (animal proteins were 60% higher), fats — 54.9% higher (animal fats — 75.3% higher).

Carbohydrates consumed were 98.6% of 1951.

There was thus a decrease in the proportion of foodstuffs rich in carbohydrates and an increase in the proportion of animal products with a large content of high-value fats and proteins.

The general calorie content of the foodstuffs consumed by the families surveyed almost reached the physiological norm — it now comes on average to 3,090 calories per member.

Consumption of fats is also approaching the physiological norm (85%), and the proportion of animal fats has even exceeded it. It must be pointed out, however, that (from the point of view of the Institute of Nutrition) the level of consumption of proteins, especially animal proteins, is still somewhat inadequate.

Analysis of the budget figures shows that the higher the family's income, the better the quality of the food consumed. Thus, the caloric content of the food consumed in the family group with per capita incomes below 400 rubles is about 2,800 calories a day, while in the families with per capita incomes ranging between 401 and 700 rubles it is at the level of the physiological norm — 3,132 calories. In the families with per capita incomes above 700 rubles the caloric content of the foodstuffs consumed is more than 3,500 calories. The higher the family's per capita average income, the greater is the cost of each calorie consumed. While in the family group with per capita income below 400 rubles 100 calories cost 23 kopeks, in the 401-700 group the cost is 27 kopeks and in the group of over 700 rubles it is 32 kopeks.

The structure of nutrition changed substantially between 1951 and 1959. We have computed the structure of food purchases in March 1951, March 1956 and March 1959 in state trade and co-operative establishments, excluding purchases at collective-farm markets (see Table 3).

The proportion of bread and flour purchased in these years decreased by almost one-third. The proportion of groats, mararoni and potatoes also decreased. But the proportion of highly nutritious animal products increased considerably — milk almost 2.5 times, dairy products (excluding butter) — almost two-fold, butter — 50%, meat and lard — about one-third, sausage and smoked products — 50%, and fresh fruit — three-fold. All this testifies to an improvement in nutrition in the families surveyed.

A very important factor in the family's budget is where foodstuffs are purchased. Those purchased in state trading establishments are considerably cheaper than those purchased at collective farm markets. The amount of foodstuffs sold by state trading and co-operative establishments increased between 1951 and 1959. The proportion of foodstuffs bought by the families at these establishments increased from 65.7% of the total in 1951 to 75.1% in March 1959.

Table 3

Structure of Purchases in March 1951, 1956 and 1959
(in 1959 prices)

Item	1951	1956	1959
Bread and flour	28.7	27.5	18.0
Groats and macaroni	7.0	5.5	4.5
Potatoes	3.1	1.3	1.4
Vegetables	5.0	2.5	3.0
Fresh fruit	1.0	1.3	3.2
Milk	2.6	5.1	6.7
Dairy products (excluding butter)	1.8	3.1	3.2
Butter	5.5	7.4	7.9
Eggs	3.9	1.2	2.7
Vegetable oil	3.6	3.6	3.0
Meat and lard	8.1	8.4	10.6
Sausage and smoked products	5.4	6.7	7.8
Fish	4.2	5.0	5.2
Sugar	11.8	15.2	11.5
Confectioneries	5.2	5.4	5.9
Other foodstuffs	3.1	3.8	5.4
Total	100	100	100

At the same time, improved food supply by state trade seriously influenced the volume and prices of products at collective-farm markets. The proportion of purchases of foodstuffs at these market by worker families decreased from 13.6% of the total in 1951 to 9.6% in 1959. The proportion of foodstuffs from household plots also dropped — from 6.7 to 3.6%.

Collective-farm markets, however, sometimes offer products, especially vegetables, that are of higher quality and better in appearance than those sold by state and co-operative stores and stalls. That is why families with relatively high per capit incomes often purchase foodstuffs at the collective farm markets. This is shown in Table 4 on the following page.

Of great importance for the rational nutrition of the population is uniform consumption of foodstuff throughout the year. But analysis of the budget figures shows that there are large seasonal fluctu tions.

In 1956 bread and bakery products, sugar,

Table 4

Sources of Foodstuffs Purchased by Families with Different Per Capita Incomes

(in per cent of total expenses on food)

Average per capita income (in rubles)	State trade and co-operatives	Public catering	Collective-farm markets	Household plots
Below 400	79.2	10.2	5.7	4.9
401-700	76.6	11.8	8.3	3.3
Above 700	68.7	12.7	15.4	3.2

atoes and butter were subject to the smallest
sonal fluctuations. These products, especially
ar and butter, were consumed more or less uni-
mly throughout the year. Potatoes were con-
ned most in the fourth quarter — 28.5% of the an-
l total — and least in the third quarter — 21.3%.
he biggest differences in quarterly consumption
956 were recorded in the case of milk.
n the second and third quarters the surveyed
ilies consumed 64% of the total consumed through-
the year, and in the first and fourth quarters —
y 36%. Milk is an extremely valuable food for
n, especially for children, and as a rule should be
t of the daily diet. The seasonal factor is, of
rse, inevitable, but such fluctuations cannot be
tified from the physiological point of view.
eat consumption in 1956 was distributed as fol-
s: first quarter — 28.4%; second quarter —
4%; third quarter — 20.1%; fourth quarter —
1%. Meat was consumed most in the fourth quar-
and least in the second.
he figures for fish consumption were as follows:
t quarter — 20.6%; second quarter — 34.3%;
d quarter — 21.7%; fourth quarter — 23.4%.
onsumption of eggs was very uneven in 1956:
1% of total annual consumption in the second and
d quarters and only 20.9% in the first and fourth
rters.
he biggest seasonal fluctuation was recorded in
consumption of fresh fruit: 5% of total annual
sumption in the second quarter and 52.4% in the
d quarter.
easonal fluctuations in the consumption of such
dstuffs as milk, eggs, fruit, etc., are to a certain
ent inevitable (because of seasonal agricultural
production), but much depends on the organization of sales, the volume and geography of purchases, the presence of a broad network of processing enterprises and canneries, the number of warehouses and cold storage plants available, transport, etc.

Although the figures given above are for 1956, seasonal fluctuations exist also at present.

This is revealed by the data of the USSR Central Statistical Administration for the subsequent years.

Analysis and study of the character of nutrition in the families surveyed make it possible to say that the level of consumption is rising from year to year, that its structure is changing and the quality of the foodstuffs consumed is improving.

Much attention is being given to improving nutrition in the current seven-year-plan period.

By the end of this period the country will be able to satisfy fully the population's requirements in fish, milk, vegetable oil, sugar and vegetables. The population will be supplied all it needs of such foodstuffs as meat, eggs and butter.

There is no doubt that at the end of the seven-year-plan period, or two or three years after it, the level of consumption will reach the scientifically based norms.

Footnotes

(1) See the article by F. Aleshina and Ia. Kabachnik above.

(2) Food expenses include those on food consumed in public catering establishments and children's institutions as well as at home.

Biulleten' Nauchnoi Informatsii. Trud i Zarabotnai
Plata, 1960, No.

V. VASIL'EVA:

Improvement in Living Conditions

One of the most important indices of the rising welfare of the Soviet people is the satisfaction to an increasing degree of their requirements in housing. The solution of the housing question is of nationwide importance and is one of the primary tasks set by the Party and the Government.

The fruitful results of their housing policy may be seen from the survey conducted between 1951 and 1959 among 103 families. (1)

Comparison of the housing conditions of these families in 1959 and 1951 shows that the number of people living in hostels and private apartments decreased as families moved to well-appointed apartments in houses of the departments and the local Soviets. What is more, the number of families occupying two rooms increased by almost one-third.

Average floor space per family increased noticeably and that meant more space per member.

Living space per capita increased on average about 29%, the most in Moscow (35%) and Gorkii (34.5%).

Twenty-seven of the 103 families surveyed between 1951 and 1959 received new apartments.

Compared to 1951, their floor space increased 63% by 1959. One-third of the living quarters put at the disposal of worker families are one and two-room self-contained apartments.

Living conditions differ from town to town.

In Moscow, almost all the workers live in department and local Soviet houses. In Gorkii, the majority (71%) live in houses owned by their enterprises, while in Ivanovo only half live in houses of their enterprise and local Soviet houses. The remainder of the families surveyed live in their own houses.

Public utility services provided the surveyed families have also improved noticeably. The table below shows these changes between 1951 and 1959 (1951 = 100).

Table 1

Public Utility Services	Moscow	Gorkii	Ivanovo
Water	122.2	150.0	122.2
Sewage	117.2	150.0	175.0
Central heating	147.6	133.0	200.0

In Moscow, more than 50% of families have baths, gas and telephones. In Gorkii and Ivanovo the figure is lower, but the situation is rapidly improving. In Gorkii, for instance, the number of apartments with water, sewage and central heating increased 1.5 times between 1951 and 1959, and many families have bathrooms now. The changes in Ivanovo in this period were even greater. The number of apartments with central heating almost doubled and abou one-third of the apartments have gas (none had ga in 1951).

Rents and all public utility charges, including electricity, gas and expenditures on kerosene and fuel came on average to about 80 rubles per famil in Moscow in March 1959, that is, to 3.5% of total expenditure. Thanks to well-organized gas supply and central heating in Moscow, expenditure on fue and kerosene is insignificant -- about 4 rubles per family per month.

The families surveyed in Gorkii spend about the same on housing as the families in Moscow — 82 rubles, or on average 4.1% of the family's total ex penses (March 1959).

However, the structure of expenditure in Gorkii is somewhat different. A significant part of the e penses -- 15 rubles — go for heating and kerosen The gasification of Gorkii, now under way, will somewhat change both the total sum and the struc ture of housing expenditures.

The Ivanovo worker families spent the most on housing in March 1959 — 113 rubles on the avera or about 5.7% of total expenditures. This is due t heavy expenses for fuel — about two-thirds of all housing expenses — since more than one-half of t families surveyed live in their own houses, and heating them in winter is a relatively expensive matter (see Table 2 on the following page).

The figures show that maintenance of a private owned house is more expensive than an apartmen in an enterprise or local Soviet house. We

Table 2

	Moscow		Gorkii		Ivanovo	
	March 1951	March 1959	March 1951	March 1959	March 1951	March 1959
Rents and public utility services (in rubles)	82.2	80.1	43.3	81.8	71.6	113.0
In % of family's monthly expenses	4.8	3.6	3.2	4.1	4.4	5.7
Of which:						
Rent (in rubles)	31.7	31.6	11.0	24.2	24.5	11.3
In % of total expenditures	1.9	1.4	0.8	1.2	1.5	0.6
Public utility servies (in rubles)	28.2	44.3	21.4	42.2	20.8	28.2
In % of total expenditures	1.6	2.0	1.6	2.1	1.3	1.4
Fuel and kerosene (in rubles)	22.1	4.2	10.9	15.4	26.3	73.5
In % of total expenditures	1.3	0.2	0.8	0.8	1.6	3.7
Maintenance, repairs and construction of private house, taxes and insurance	--	1.3	—	9.3	10.8	151.2*

* The sharp increase in expenses for this item is due to the large sum spent by one of the Ivanovo worker families to build its own house.

mpared the housing expenses in 1951 of thirteen novo families living in department houses to those thirteen families living in their own houses. With per family earnings almost the same, fami-s living in department houses spend only 89.5 rubles per month on housing (including maintenance and insurance), or 5.5% of their income. Those living in their own houses spend 167.4 rubles, or 10.4%. Of this sum, 70 rubles go for taxes, insurance and miscellaneous maintenance expenses. The

(Average in Rubles per Month in 1951)

	Living in Departmental Houses		Living in Their Own Houses	
	Total	%	Total	%
I. Average monthly expenditure	1,627.7	100.0	1,615.8	100.0
II. Average monthly housing expenditure Total (1+2+3+4+5)	89.5	5.5	167.4	10.4
1. Rent	29.0	1.8	—	—
2. Public utilities (electricity, water, sewage, etc.)	37.2	2.3	21.2	1.3
3. Firewood and kerosene	15.4	0.9	52.3	3.2
total (1+2+3)	81.6	5.0	73.5	4.5
4. General repairs, taxes, insurance, etc.	6.3	0.4	70.5	4.4
5. Maintenance expenses	1.6	0.1	23.9	1.5

repair of a private house is much more expensive than of that owned by an enterprise: 24 rubles on the average per month for the former and 1.60 rubles for the latter.

This shows that families living in houses owned by enterprises are granted considerable benefits by the enterprises and the state.

Families living in their own houses have, in certain cases, an opportunity to work their household plots, which give them an additional income of about 78 rubles a month.

What changes have taken place in the housing conditions of the surveyed families, grouped according to their different levels of per capita income?

The most remarkable improvement in housing has taken place in the group with average per capita incomes below 400 rubles. Between 1951 and 1959 floor space per family increased on the average by 36% and by 42% per member of family. The proportion of apartments provided with all forms of public conveniences increased considerably. Despite this, housing expenses, including public utility services and heating, do not exceed 4.4% of the total family expenses in March 1959.

There was also visible improvement in the housing conditions of the family group with per capita incomes ranging from 401 to 700 rubles. The number of families living in apartments with gas increased more than two-fold and almost half of the families received apartments with baths and telephones.

Improvement of the living conditions of this group has affected their rents very little. While i 1951 rent, public utility services and heating came to 67.8 rubles per family, or 4.5% of total expenditure, in 1959 it was 71 rubles, or 3.9% of total expenditure.

In the more highly-paid bracket (with per capita incomes of 700 rubles or more), housing condition improved less from 1951 to 1959 than in the other two groups, although here too there was a marked improvement in public conveniences provided, especially gas and baths.

The data cited show that the improvement of housing conditions does not depend on the families material prosperity. On the contrary, there was more intensive improvement for the group with th lowest per capita incomes.

The results of the survey conducted among 103 worker families in Moscow, Gorkii and Ivanovo pe mit the conclusion that there was steady improvement of housing and communal conditions of existence, for all the families.

Footnote

(1) In describing the housing conditions of the 103 families surveyed, we had in view living spac only, that is, space excluding kitchens, corridors, etc.

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Biulleten' Nauchnoi Informatsii. Trud i Zarabotna
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M. BALASHOVA:

A Higher Cultural Level

The improvement in the working people's welfare is attended by a rise of their cultural level. The family budgets do not fully reflect this rise — it is reflected only in the increase of expenditure on cultural and educational needs. The cultural facilities offered without change by the state are not reflected, or are reflected only partially, in the worker families' budgets.

Expenses for the satisfaction of cultural needs increase year by year. This is shown by the data (computed on the basis of annual expenditures) obtained in the survey of 92 families (see Table 1 on the following page).

While in 1951 the average expenses of the 92 families came to 289 rubles, in 1959 the figure increased to 605 rubles, or more than doubled. In Gorkii the increase was 3.5 times and in Ivanovo was 75.7%. Cultural-educational expenses in Moscow were somewhat lower in 1959 than in 1951, d to the fact that about half of the families surveyed had obtained television sets by 1959 and thus reduced their movie and theater expenses.

Table 1

Expenses on Cultural and Educational Undertakings
(on average per family)

	Number of Families Surveyed	Expenditures on Cultural and Educational Needs on Average per Family per Year (in rubles)		1959 in % of 1951
		March 1951	March 1959	
All families	92	289	605	214.1
Of which:				
Moscow	39	647	617	95.4
Gorkii	22	156	570	365.5
Ivanovo	31	350	615	175.7

The proportion of the expenses on culture and ducation in the total expenses is increasing with ach year. Between 1951 and 1959 the increase in orkii was 2.4 times, in Ivanovo — almost one-third. or all the families the average increase was aproximately two-thirds.

Let us see how these expenses increased between 951 and 1959 in the worker families with different verage per capita incomes (see Table 2).

Table 2

Expenses on Cultural and Educational Undertakings in Families with Different Per Capita Incomes

Average Per Capita Income (in rubles)	Number of Families	Cultural-Educational Expenditures per Family per Year (in rubles)		1959 in % of 1951
		March 1951*	March 1959*	
Below 400	15	131	577	441.0
401 to 700	57	236	568	240.3
Over 700	20	557	732	131.5

* Expenses for March 1951 and 1959 are computed on the basis of annual level.

As may be seen from the table, cultural and edutional expenditures in the families rose most in ose with per capita incomes below 400 rubles and ast in those with per capita incomes of over 700 bles.

In the first group these expenses in 1959 were 446 rubles above the 1951 figure, in the second group — 332 rubles more, and in the group with per capita incomes above 700 rubles — 175 rubles, more.

The proportion of these expenses in the sum total of expenditures also increased most in the families with relatively low per capita incomes. In the group with per capita incomes below 400 rubles the proportion went up four-fold and in the group with incomes between 401 and 700 rubles — twofold.

At the same time these figures confirm the emerging tendency for expenses on cultural needs to even out in all the family groups.

An idea of the growing satisfaction of the cultural needs of the families surveyed may be obtained from the figures on cinema, theater, museum and lecture attendances (see Table 3).

Movie attendance in March 1959 was thus 37.6% greater than in March 1956 and theater and concert attendance -- 31.8% greater. In Moscow, however, movie attendance increased by only 2.9% and theater attendance dropped somewhat, all in connection with the expansion of the television network. In Gorkii, theater attendance increased substantially, as did movie attendance in Ivanovo.

Table 3

Number Attending Movies, Theater, Lectures, etc. in March 1959 as Compared to March 1956, Taken as 100

	Number of Attendances for all Families Surveyed	Of which:			By Family Groups With Average Per Capita Incomes (in rubles)		
		Moscow	Gorkii	Ivanovo	Below 400	401 - 700	Above 700
Movies	137.6	102.9	150.0	184.6	260.3	120.1	119.2
Theater and concerts	131.8	91.0	292.9	148.0	100.0	154.3	110.0
Lectures, addresses and other cultural undertakings	179.7	154.0	140.0	301.6	300.0	254.3	156.0

Moreover, while in March 1956 movie attendance in the second and third family groups was double that of the first group, in March 1959 this difference disappeared almost completely along with the general increase in attendance. From March 1956 to March 1959 movie attendance in the first family group increased by 160%, in the second group -- 20 and in the third group -- 19%. Theater and concert attendance in the same period increased only in the second (54%) and third (10%) groups.

It should be pointed out, however, that data for just one month of the year (March) by itself cannot thoroughly characterize the rise in attendance at movies, theaters and other cultural undertakings. Unfortunately, we do not possess annual data for 195

The cultural level of the families surveyed may also be determined to a certain extent by the existence of family libraries and the number of books in them (see Table 4).

Table 4

Presence of Libraries in the Families Surveyed

	Year	For All Families Surveyed	Moscow	Gorkii	Ivanovo	By Family Groups With Average Per Capita Incomes (in rubles)		
						Below 400	401 - 700	Above 700
Number of families possessing libraries	1951	42	14	8	20	11	26	5
	1959	65	29	14	22	11	40	17
Number of books in the families	1951	1,359	497	191	671	208	978	109
	1959	3,596	1,749	564	1,283	338	2,380	790
Average number of books per library	1951	32	36	24	34	19	38	22
	1959	55	60	40	58	31	60	46
Proportion of families with libraries (in % of all families surveyed)	1951	45.7	35.9	36.4	64.5	73.3	47.4	25
	1959	70.7	74.4	63.6	71.0	73.3	70.2	85

The majority of the families are systematically quiring new books and are steadily increasing the ze of their libraries. The number of families ssessing libraries is rising constantly. In 1951, : instance, 46% of the families had their own li- aries with an average of 32 books in each; in 1959 e number of families with their own libraries in- eased by 25% and the number of books in each rose average to 55.

Between 1951 and 1959 the number of families in oscow with their own libraries increased by 38% d the average number of books by 24; in Gorkii the rresponding figures were 27% and 16; in Ivanovo 7% and 24.

While there were only 19 books per family with r capita incomes below 400 rubles in 1951, there ere already 31 books in 1959. In the 401-700 ruble acket the number of books per family increased om 38 in 1951 to 60 in 1959.

The rise in the cultural level of the families sur- yed may also be judged by the figures on subscrip- ns to newspapers and magazines (see Table 5).

Table 5

Subscription to Newspapers and Magazines in the 92 Families Surveyed
(in March)

	Year	For all Families Surveyed	By Family Groups With Average Per Capita Incomes (in rubles)		
			Below 400	401-700	Above 700
Number of families surveyed	1956	92	15	57	20
	1959	92	15	57	20
Number of families subscribing to newspapers and magazines	1956	56	6	39	11
	1959	71	10	46	15
Number of newspapers and magazines subscribed to	1956	76	6	56	14
	1959	121	10	77	34
Proportion of families subscribing to newspapers and magazines (in % of total families surveyed)	1956	60.86	40.0	68.4	55
	1959	77.17	66.6	80.7	75

Sixty per cent of all the families subscribed to wspapers and magazines in 1956. In 1959 their mber increased to 77% (by 27% in the first group, % in the second and 20% in the third).

The families which subscribe most to newspapers d magazines are those with per capita incomes below 700 rubles. In 1959 they subscribed to more than two newspapers and two magazines on the average. The biggest increase was recorded in the family group with per capita incomes below 400 rubles. By 1959 it had almost caught up with the other groups.

Many members of the families regularly take books from public libraries. The increase in the number of people who have their own books and take books from public libraries is a rather important index of the growing cultural level (see Table 6 on the following page).

In 1956 there were only about 18% of all the members of families (schoolchildren included) taking books from libraries; in 1959 their number increased to 30%. In Moscow the number rose by 11.3% in this period and in Ivanovo by 24.2%.

Of the high and middle-income families, 85% had their own libraries in 1959 and, moreover, about 40% of their members took books from public libraries.

The cultural level of the worker families surveyed may also be gauged by the number of radio and television sets, musical instruments, etc., in their possession. The number of radio sets in the 86 families surveyed (2) increased by 40% between 1951 and 1959, including an almost six-fold increase in Moscow. While in 1951 there was one

Table 6

Data on the Use of Public Library Books

	Year	For all Families Surveyed	Of which:			By Family Groups With Average Per Capita Incomes (in rubles)		
			Moscow	Gorkii	Ivanovo	Below 400	401-700	Above 700
Number of family members using the libraries	1956	60	28	12	20	6	38	16
	1959	101	43	12	46	10	67	24
Proportion of family members using the libraries (in % of the total number of family members, including schoolchildren)	1956	17.6	17.8	14.3	20.0	8.5	18.3	26.2
	1959	29.8	29.1	13.8	44.2	13.5	32.8	39.3

radio set for every nine families, in 1959 every other family had one.

In 1951 not one of the families had a television set; in 1959 24 families possessed sets.

The number of musical instruments in the families increased between 1956 and 1959 as follows: 1.5 times in the groups with average per capita incomes below 400 and above 700 rubles and 2.5 times in the bracket with per capita incomes ranging from 401 to 700 rubles. By 1959 more than 75% of the families surveyed had sewing machines and half of the families in the below-400 group and one-fourth of the families in the above-400 group had bicycles.

Footnotes

(1) We do not consider here questions concerning the growth of general and specialized education since there are no indices for this in the budgets.

(2) Families which supplied data on radio sets.

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Biulleten' Nauchnoi Informatsii. Trud i Zarabotnai
Plata, 1960, No. 1

I. NEMCHINOVA:

Changes in the Composition and Size of Worker Families

Demographic indices, such as employment per family, number of dependents and average size of family, are widely used in analyzing worker family budgets.

Without these indices there could be no analysis of the incomes and expenditures of the worker families or of the level of consumption. In studying a family's budget, we proceed from a definite economic index — in determining a family — the existence of a common budget for all members.

All surveyed families according to number of members are distributed as shown in Table 1 on the following page.

The table shows that the number of families of two increased sharply from 1951 to 1959. This is explained both by the formation of new young

Table 1*

Number of Members	1951		1959	
	Total	In % of Total	Total	In % of Total
Single persons	9	8.7	5	4.8
Families of two	9	8.7	21	20.4
Families of three	22	21.4	21	20.4
Families of four	24	23.3	30	29.1
Families of five	15	14.6	15	14.6
Families of six	14	13.6	4	3.9
Families of seven	10	9.7	7	6.8
Total	103	100.0	103	100.0

* Since this article deals only with the changes in the composition and structure of the same group of families, analysis of the data for 1951 and 1959 was made of a different number of families (94 in 1951 and 98 in 1959). This is explained by the fact that people registered as single in 1951 have since acquired families.

Where the total is discussed (families, single persons and pensioners' families), the analysis covers 103 families.

milies and by the departure of grown-up children
new work projects, study, etc.

The number of families of three underwent prac-
ally no change. The proportion of families of four
mewhat increased. But the proportion of families
six and more and of single persons decreased sub-
ntially. The average size of the families sur-
yed decreased by 10.2% in 1951-1959 (from 4.30 to
6 persons), the explanation being the departure of
own-up children from the "aging" families.

The average size of a family differs according to
branch of industry in which its members work
e Table 2).

Table 2

	1951	1959
Machine-building	4.5	4.1
Ferrous metals	4.8	4.3
Chemical	3.8	3.6
Textile	4.1	3.8
Garments and knitted goods	3.7	2.9

As the table indicates, the size of the families surveyed somewhat decreased in the years under review in all the branches of industry. But the largest size families are still among the workers of the ferrous metals industry and the smallest among the workers of the garments and knitted goods industry.

Along with changes in the average composition of families there is occurring an increase in the number of working members of the family and a decrease in the number of dependents per worker (see Table 3 on the following page).

The table reveals that it is only in the families working in the ferrous metals industry that the number of working members decreased between 1951 and 1959, from 1.56 to 1.20. The number of dependents, which dropped in 1956, rose again in 1959.

In the 16 families surveyed in the ferrous metals industry there were 25 workers in 1951, and only 18 in 1959. Analysis of the causes confirms the earlier proposition regarding the "aging" of families. First, grown-up children-workers leave their parents and form their own families (three cases); second, parents who worked in 1951 had become pensioners by 1959 (three cases). In addition, one of the mothers who had worked became a dependent after giving birth to a child.

Table 3

Branch Industry	1951		1956		1959	
	Number of Workers	Number of Dependents Per Worker*	Number of Workers	Number of Dependents Per Worker*	Number of Workers	Number of Dependents Per Worker*
Machine-building	1.51	1.96	1.91	1.26	2.05	0.91
Ferrous metals	1.56	2.08	1.68	1.66	1.20**	1.95**
Textile, garment and knitted goods	1.72	1.29	2.05	0.70	2.08	0.58
Chemical	1.50	1.53	1.55	1.50	1.70	0.88

* Single persons excluded.

** Excluding one family where both workers went on pension and have dependent children.

The number of workers in families employed in the textile, garment and knitted goods industries is growing constantly. While in 1951 there were on the average 1.72 workers and 1.29 dependents per worker in these industries, in 1959 the figures were 2.08 and only 0.58 respectively.

It should be remembered that the average wage in these industries is somewhat lower than in other branches, for example, in the machine-building, ferrous metals, and textile industries. That is why the families of textile and garment workers often need more workers than those in the other industries.

The same process, that is, the increase in the number of workers and the decrease in the number of dependents, is taking place, though more slowly, in the chemical and machine-building industries.

The survey also showed that the general growth of employment was attended by an increase in the number of women working and a decrease in housewives. Thus, while in 1951 there were 31 families out of the 103 surveyed (30%) in which women between the ages of 18 and 54 did not work (chiefly in the families in the ferrous metals and machine-building groups), in 1959 the number of families with housewives had decreased sharply. Of the 103 families surveyed there were only 18 (17.4%) in which there were housewives. Of these 18 families members of 17 are engaged in the ferrous metals, machine-building and chemical industries and only one in the textile, industry.

The composition of the families also changed between 1951 and 1959. In 1951 a family of on average 4.30 people could be divided as follows: workers — 1.56; dependents — 2.63; pensioners — 0.06; persons receiving stipends — 0.05. In 1959 the average size of the family decreased to 3.86, the number of workers rose to 1.91, the number of dependents dropped to 1.72, the number of pensioners and people with stipends increased to 0.16 and 0.07 respectively. Characteristically, the proportion of pensioners in the families increased considerably in this period. This is explained not only by the increase in this age group in the composition of the families, but also by the introduction of the new pe sion law.

In per capita income per month the families surveyed were divided in 1959 as follows:

Below 400 rubles — 16.5%
Between 401 and 700 rubles — 60.2%
Above 700 rubles — 23.3%

Here is how these income groups were distribut among the branches of industry in 1959 (see Table 4 on the following page).

The biggest proportion in all branches of industry are the families with per capita incomes ranging from 401 to 700 rubles and the smallest are those with per capita income below 400. Ther is not one family whose head works in the ferrous metals industry in the group with per capita incomes below 400 rubles.

It is interesting that families with per capita incomes of more than 700 rubles are almost evenly distributed among the four branches of industry. This is explained by the increase in the incomes c the families surveyed due to the workers' higher skills, regulation of wages and the increase, in th

Table 4

Groups of Families by Average Per Capita Income (in rubles)	Machine-Building	Ferrous Metals	Chemicals	Textile, Garment, Knitted Goods
Below 400	21.6	—	16.7	17.9
401-700	54.1	80.0	58.3	59.0
Above 700	24.3	20.0	25.0	23.1
Total	100.0	100.0	100.0	100.0

ajority of cases, in the number of workers per
mily.

Distribution of the families by number of children
d different per capita incomes (excluding single
rsons) appears as follows (see Table 5).

Table 5

Groups of Families by Per Capita Income (in current prices of the corresponding years) (in rubles)	1951			1959		
	Number of Families	Average Size of Family	Number of Children per Family*	Number of Families	Average Size of Family	Number of Children per Family*
Below 400	41	5.07	2.75	19	4.79	2.42
401-700	48	3.79	1.62	58	3.81	1.06
Above 700	5	3.00	0.40	21	3.19	0.47
Total	94	4.30	2.04	98	3.86	1.19

* Excluding working adolescents.

Since average per capita income is a magnitude
rived from the size of the income and the number
members of a family, the group with relatively
all per capita incomes (below 400 rubles) con-
ns, as a rule, families with many dependents —
ldren. In other words, these families find them-
ves in the group with relatively small per capita
omes not because of low income but because of a
nificantly large number of children.

Thus, families with per capita incomes below 400
bles have on the average 2.42 children, while the
nilies with higher per capita incomes (above 700
bles) have only 0.47 children, or one child for
ery two families.

The index on natural fluctuations of the population
l all demographic indices are strongly influenced
the sex and age composition of the population. In
tributing the members of the families surveyed
ngle persons included) by sex and age, we see the
lowing changes during the 1951-1959 period. In 1951 40.5% of children were 13 years of age or less: 1.9% were under one year; 4.3% were between one and two years of age; 14.3% were between three and six years of age; 20% were between seven and 13 years of age. In 1959 the number of children of 13 or less came to only 24.7%: there were no children under one year, 1.8% were between one and two years of age; 2.8% were between three and six years of age and 20.1% were between seven and thirteen years of age.

The decrease in the number of infants is natural in view of some "aging" of families.

Noteworthy is the considerable predominance of women over men of working age. Thus, for 74 men between the ages of 18 and 59 in 1951 there were 110 women between 18 and 54, and in 1959 there were 136 women for 99 men (see Table 6 on the following page).

In worker families employed in the ferrous metals industry the number of men and women is the same, but in the textile, garment and knitted goods industries there were twice as many women of working age as men in 1951. This state of affairs is to a certain degree due to the consequences of the war and to the specific branch of work (in

Table 6

	1951		1959	
	Men 18-59	Women 18-54	Men 18-59	Women 18-54
Machine-building	30	38	37	49
Ferrous metals	17	19	19	19
Chemical	8	12	9	15
Textile, garments and knitted goods	19	41	34	53
Total	74	110	99	136

the textile and garment and knitted goods industries the workers are basically women).

This article tried to give a brief analysis of the changes that took place in the same families surveyed over eight years. Even from the small sample (103 families) it is clear that employment has increased sharply, the number of dependents is decreasing and the number of dependent women is lessening. The increasing number of children's institutions and improved public services free women from unproductive household work and create the conditions for their employment in production.

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ABOR FORCE, LABOR PRODUCTIVITY, WORKING CONDITIONS

Sotsialisticheskii Trud, 1961, No. 3

. RUSANOV:

llocation and Utilization of the Soviet Labor Force

uring the Seven-Year Plan

Fulfillment of the objectives of the Seven-Year an for the development of the Soviet economy re- ires that additional labor power be drawn into so- al production and that the country's labor force be tionally distributed and employed. According to e calculations in the target figures, a considerable se in the numbers of industrial and office workers envisaged during the Seven-Year Plan because of e enormous scale on which material production is be expanded and the significant expansion of the twork of agencies of science and culture, public alth, public catering, trade and communal ser- ces. The census data inform us that the population the USSR rose by 9.5% from 1939 to 1959, while ose of working age increased from 102,000,000 to 9,800,000, or by more than 17%. The greater rate population growth in the working age range makes r an increase in the number employed in the na- nal economy.

The involvement of the working population in so- al production is governed both by the rates of in- ease of production and the rise in the productivity social labor. These two conditions operate in op- site directions: expansion of production assumes increase in the number of productive individuals; e rise in labor productivity makes it possible to crease the volume of gross production without in- easing, or even reducing somewhat, the number of rsons engaged in the production of material goods. Here it should be emphasized that growth in mate- l production on the basis of an increase in labor oductivity makes it possible to increase the num- r of persons working in the nonproductive sphere, asmuch as society becomes capable of developing ltural and living services on a larger scale. The nned distribution of labor between material pro- ction and the nonproductive sphere, between anches of the economy and the economic districts the country, is one of the necessary conditions for h rates of expanded socialist reproduction.

The qualitative difference between the labor force engaged in branches of material production and those in the nonproductive sphere lies in the fact that the former by their labor participate directly in the production of material wealth, increasing the national income, while the latter assist in the success of work in the sphere of material production and participate in the redistribution of the national income, serving the country's working people. Therefore rational distribution of the gainfully employed between material production and the nonproductive sphere is of enormous economic significance, and the problems of perfecting methods of calculating and planning this distribution acquire major scientific and practical value. Present-day census-of-occupation procedure makes it possible to determine with more or less accuracy the proportion of workers engaged in material production and in the nonproductive sphere. However, in our opinion the methods employed by the Central Statistical Administration in this respect still require some improvement. These refinements are needed primarily with respect to those groups of workers for example, in internal commerce and public catering, whose labor on the one hand is involved with the production of material wealth, which on the other hand is in the unproductive category.

According to the data of the Central Statistical Administration the distribution of workers between the productive and the nonproductive spheres of Soviet economy adds up as shown in the table on the top of the following page. (2)

It must be borne in mind that the Central Statistical Administration considers all personnel in commerce and public catering to belong in the sphere of material production. But it is specifically in these branches that less than half the work goes into further processing the product while the bulk goes into its sale. Marx classified the labor of workers in commerce under material production only to the degree that it involve a continuation of the process of commodity production (storage,

(as % of total)

	1940	1950	1955	1958	1959
In the branches of material production	87.9	86.2	85.2	84.2	83.9
In the nonproductive branches	12.1	13.8	14.8	15.8	16.1
Total	100.0	100.0	100.0	100.0	100.0

packaging, sorting, etc.). What relationship to the sphere of material production has the labor of those workers who are engaged in service, for example, salespeople, waiters, etc.?

Placing those workers who do not participate in the productive process in the sphere of material production distorts the proportions which actually exist in the distribution of the labor force between production and the services.

Thus an analysis of the kinds of activity of workers in commerce shows that 30% are engaged in the process of commodity production and 36% in public catering. The rest are engaged in the sale of the product and in service to the population. In our opinion it is advisable to classify in the category of material production those people in commerce who are engaged in warehousing, in industrial enterprises and in the transport system of commerce. Those to be classed as nonproductive are the personnel engaged in the sale of the product, the administrative and managerial personnel etc. In public catering, those persons to be classed in material production are the kitchen help, warehouse workers and vegetable storage personnel, while the salespeople, those working in the dining room as such, the administration and management employees should be in the nonproductive sphere. The personnel engaged in the supply of materials and equipment should be classified wholly in the productive sphere

The relationship between those working in the productive and nonproductive spheres (on an average annual basis) may be seen from the following:

	Number (In Thousands) (3)			Proportion as % of Total		
	1940	1956	1959	1940	1956	1959
National economy as a whole	59,795	75,932	80,554	100	100	100
Material production as a whole	50,980	63,430	66,392	85.3	83.5	82.4
Including:						
Industry	10,967	18,500	20,205	18.4	24.4	25.1
Construction	1,563	3,550	4,800	2.6	4.7	6.0
Agriculture and forestry	31,579	31,890	30,254	52.8	42.0	37.6
Transport and communications serving productive purposes	2,927	4,372	5,001	4.9	5.8	6.2
Commerce, public catering, procurement, supply of materials and equipment	3,303	3,826	4,394	5.5	5.0	5.4
Other branches of material production	641	1,292	1,738	1.1	1.7	2.2
Nonproductive branches as a whole	8,815	12,502	14,162	14.7	16.5	17.6
Including:						
Housing and public services	1,221	1,503	1,710	2.0	2.0	2.1
Public health	1,507	2,736	3,248	2.5	3.6	4.0
Education and cultural enlightenment agencies	2,663	4,103	4,549	4.5	5.4	5.6
Science and scientific services	361	1,094	1,462	0.6	1.4	1.8
Transport and communications servicing the nonproductive sphere	976	1,458	1,667	1.6	1.9	2.1
Credit and insurance institutions	262	266	258	0.4	0.4	0.3
Government economic administration cooperatives and public organizations	1,825	1,342	1,268	3.1	1.8	1.6

The total number of persons employed in the na- onal economy of the USSR in the period 1950-1958 creased by 15.6%, with a constant increase in the roportion employed in the nonproductive sphere. his occurred as a consequence of the rise in so- ial wealth, of increased labor productivity and of nprovement in the material well-being of the Soviet eople.

Some Soviet economists have expressed concern ver a possible increase in the percentage of those ccupied in the nonproductive sphere and have ad- anced suggestions to redistribute labor in favor of e sphere of material production. Fears and sug- estions of this type in our opinion do not have either eoretical or practical justification and are based n an erroneous, simplified approach to the prob- em. The relationship between the number of work- g people engaged in the various branches of mate- ial production and those in the nonproductive sphere epends upon the level of development of the produc- ve forces of society, on the productivity of social bor and the existing social structure. It is not ifficult to see that our country has in recent years xperienced a rapid rise in the number of working eople only in those branches of the nonproductive phere which were either directly connected with roduction or assisting in the cultural growth and nprovement of services to the population. Thus rom 1950 to 1958 the personnel in housing and pub- c services rose by 40.2%, those in public health by .5%, those in education by nearly 33% and those in cience by 85.7%. At the same time the administra- ve and managerial personnel of the government d of social organizations diminished by 29%. Vir- ally no employment changes occurred in credit d insurance agencies. It is obvious that the in- rease in employment in the nonproductive sphere as the result primarily of the growth of material roduction, based on the achievements of modern cience and engineering. These achievements them- elves require a considerable increase in employ- ent in certain nonproductive spheres (science, gher and specialized secondary education, etc.).

The expansion of medical services to the popula- on has not only improved the people's health and educed mortality but also sharply reduced working me losses. The seriousness of such losses is ade clear by the fact that in industry alone loss of orking time per worker in consequence of various nesses comes to from 11 to 13 days. (4) The nprovement and expansion of medical services will ake possible a substantial reduction in illness and onsequently an increase in the fund of actual work- g time.

The more rapid the development of the forces of roduction and labor productivity the greater the portion of labor the socialist society can allocate to the nonproductive sphere. The rates of increase in employment in the nonproductive sphere exceed the rates of increase in employment in material production; as a consequence the proportion of those employed in the nonproductive sphere rises somewhat. This type of redistribution of the labor force will be one of the most important factors in the further improvement of public health, the expansion of housing and public services and the development of science and art.

In characterizing the significance of the growth of labor productivity for changes in the relative distribution of the labor force between the productive and nonproductive spheres, Marx wrote: "Let us assume that the productivity of industry has risen to the point that whereas, hitherto two-thirds of the population participated directly in material production, today only one-third is so engaged. Hitherto two-thirds of the population produced the means of existence of three-thirds of the population; today one-third produce for three-thirds. Formerly "net income" (as distinct from the income of the worker) was one-third; now it is two-thirds. Now the nation — if we disregard (class) contradiction — will use one-third of its time for direct production instead of the previous two-thirds. If distribution were uniform, all would have more time — two-thirds — for nonproductive labor and leisure." (5) [Retranslated from the Russian — Ed.]

Thus Marx recognized that an increase in the productivity of social labor could be accompanied by a substantial rise in the proportion of labor engaged in nonproductive work. However, a rise in the level of employment in the nonproductive sphere has a different social character, depending upon the social system and results in different social consequences.

In modern capitalist society an increase in the share of the labor of society expended in the nonproductive sphere reflects advancing parasitism and decay. Enormous numbers of persons are occupied in the government apparatus, in financial agencies and banks, in commerce. A great mass of living labor is expended upon personal services to the exploiting classes. Ever-increasing numbers of working people are unable to find employment and are condemned by capitalism to hunger and poverty.

Under socialism the development of the nonproductive sphere depends mainly upon the increase in labor productivity in material production, primarily in industry. In turn, the nonproductive sphere has a positive influence upon the development of the productive forces and the productivity of social labor. This is manifested with particular clarity in the growth of employment in science. Marx repeatedly referred to science as a productive force, emphasizing its enormous influence upon the development and improvement of production. Education and public health also exercise a direct effect upon the improvement of production and the growth of labor productivity. In this connection it should be noted that increase in the personnel of the nonproductive sphere occurs not as a consequence of reductions in the numbers employed in material production but essentially as a consequence of the natural increase in the employable population. In the USSR the number of persons engaged in socially useful labor in both productive and nonproductive spheres is continually rising.

An increase in the number of persons engaged in various branches of the nonproductive sphere is entirely natural. But from this it does not follow that any particular nonproductive sphere may not employ human labor extravagantly or that it does not have internal resources for economizing.

The geographic distribution of workers in certain branches of the nonproductive sphere in our country has not been uniform, particularly in public health, in science and the arts and in housing and public services. Let us consider public health. In 1959 there were on average 17.9 physicians per 10,000 population for the USSR. But Georgia had 31.4 physicians, Azerbaidzhan 21.9, Armenia 21.8, Latvia 24.2, Estonia 22.4, Belorussia 13.3, Tadzhikistan 11.2, Kazakhstan 12.7, Moldavia 12.8. The distribution of doctors among the various regions within the republics is even more uneven. Further improvement in medical services requires not only an increase in the total number of medical personnel but a more uniform distribution of medical men by region, with particular attention to further improvement in medical services to the rural population.

It is characteristic, however that personnel is increasing more rapidly in the decisive spheres of material production than in the service field. In the nonproductive sphere, the number of employed persons rose by 26.4% from 1950 to 1958, while in industry the rise was 38.5% and in construction 44.4%. Therefore, despite the fact that the percentage of personnel in the nonproductive sphere is continually rising and the service sphere is acquiring ever greater importance in the life of our society, the decisive role in changing the structure of employment still belongs to the production of material goods. The rates of development of the major branches of production, the increase in labor productivity and the equipment available to it determine the relative distribution of the labor force both among the branches of material production and in the nonproductive sphere.

The development of industrial production and the rise in available equipment are accompanied on the one hand by an increase in industrial-productive personnel and on the other by a change in its composition. The proportion of highly skilled workers has increased considerably. With greater all-round mechanization and automation of the processes of production workers are increasingly freed from monotonous physical effort and their labor becomes increasingly creative, many-sided, requiring a combination of physical and mental labor. One result of these processes has been a rapid increase in labor productivity and gross production in all branches of the economy, particularly in industry and construction.

Determination of the level of labor expenditure in industry and agriculture is of great importance in the study of the distribution and utilization of the available labor supply. These two branches of the economy account for the production of the basic material goods required for human life and about 66% of all those gainfully employed in our economy. In 1959 average annual employment in agriculture was 33,000,000 while in industry the number was 20,200,000, or nearly 13,000,000 less than in agriculture.

The rates of increase in gross production and in labor productivity are considerably higher for industry than for agriculture. Thus gross industrial production increased 4.3 times from 1940 to 1958, labor productivity 2.4 times and the number of persons productively employed in industry increased nearly two times. In agriculture, gross production rose during this period only 1.5 times, labor productivity 1.7 times and there was a small decline in employment. Thus gross production of industry rose more than six times and labor productivity more than twice as fast as gross production and labor productivity in agriculture.

Despite the all-round development of agricultural production, it remains to a considerable degree a seasonal occupation. This results in nonuniform utilization of the labor force on collective farms. For purposes of more rational utilization of the labor force it is necessary, particularly in winter, to expand the construction of enterprises for local processing of agricultural raw materials. This will make it possible to bring the processing industry close to the sources of its raw material, its labor force and the areas of consumption. Agriculture has major labor reserves which, properly utilized, will make it possible to achieve a large-scale rise in the output of agricultural products.

Concrete measures taken in recent years for a sharp upturn in agriculture have greatly improved the rates of its development. A great deal of

tention is now being given to further increases in
ricultural production, its all-round mechanization
d electrification and improvement in the organiza-
on of labor. The Plenum of the CPSU Central Com-
ittee held in January 1961 defined specific direc-
ons to be followed to achieve further increase in
ricultural output. All this creates conditions for
celerating the rise in agricultural labor produc-
vity and for more efficient utilization of the rural
bor force. The possibility now arises for freeing
certain portion of this labor force and trans-
rring it to other branches of the economy, particu-
rly to industry and construction.

In the current Seven-Year Plan there will also be
increase in the personnel in commerce. The
pid rise in industrial and agricultural production
s created favorable conditions for the further de-
lopment of commerce and public catering. The
rget figures for the development of the economy
om 1959 to 1965 envisage a 62 to 65% rise in the
tional income, permitting an increase of 60 to
% in consumption. The bulk of consumption takes
ace, as we know, through Soviet commerce and
blic catering. It follows therefore that the number
persons occupied in these branches must be larger
an at present. It must be noted that the expansion
the trade network has lagged in the past decade
hind the growth in commodity circulation. The in-
ease in commercial institutions which has actu-
ly occurred allows for the population to be satis-
ed only within the limits of natural population in-
ease. This becomes evident when we consider that
e number of commercial enterprises has shown
rtually no increase per 10,000 population. How-
er, this is not the full story. The purchasing pow-
of the population rises from year to year; there-
re a situation where the number of commercial
stitutions per 10,000 population remains static can-
t satisfy present-day requirements. The retail
siness done by the government and cooperative
stems rose by 170%, in comparable prices, from
40 to 1958, whereas per capita business in-
eased 150%. From 1950 to 1958 sale of foodstuffs
d other commodities rose by 96%. However, the
mber of personnel engaged in commerce and the
tering industry rose by only 31% from 1940 to
58; the increase from 1950 to 1958 was 23%. In a
mber of cities and to a greater degree in the coun-
yside, the trade network is to this day utterly in-
equate. In connection with the rapid rates of de-
lopment in production, the present Seven-Year
an will see a substantial rise in the volume of
mmodities offered for sale. This will result in
pansion of the trade network and the catering in-
stry. As compared to 1958 the number of persons
gaged in trade and public catering will (according to the target figures) be increased by 45% in 1965.

The structure of employment in the catering industry will change as a consequence of reorganization of the work of its enterprises. Toward the end of the Seven-Year Plan personnel engaged in cooking will constitute nearly half of the total number employed in this field. There will be a corresponding reduction in the proportion of personnel engaged solely in the sale of the ready product. The further development of Soviet commerce and of the catering industry will have a positive effect upon the well-being of the people and will facilitate liberation of the employable population from housework and work in personal household plots, thus making it possible for them to go into social production.

In the course of the building of socialism it is necessary to rectify a certain historically-conditioned geographical unevenness of distribution of the labor force in the country. The target figures for the development of the economy in 1959-1965 envisage exploitation of the rich and vast natural resources of the eastern regions. Coal and metallurgical centers will be established in Siberia and Kazakhstan; a large chemical industry will be developed in the eastern areas, as will petroleum processing and other branches of industry. About 40% of all capital investment during the present Seven-Year Plan will be in the east. This requires a corresponding redistribution of the labor force. Today the geographic distribution of the population is described by the following data (expressed as % of total): 1.6% in the northern European portion of the USSR; 4.5% in the northwest; 20.3% in the central regions; 6.0% along the Volga; 4.2% in the northern Caucasus; 8.5% in the Urals; 5.5% in western Siberia; 3.3% in eastern Siberia; 2.1% in the Far East; 11.3% in Central Asia and Kazakhstan; 4.5% in the Transcaucasus; 21.6% in the south; 6.6% in the west.

Thus 41.9% of the population is concentrated in the central and southern districts of the USSR. 77.8% is in Europe and the Urals and only 22.2% in the Asiatic part of the country. This distribution of the country's labor force is not in accord with the location of its natural resources and the prospects for the development of the eastern districts. According to computations by the Labor Research Institute the development of the national economy of the USSR envisaged by the Seven-Year Plan will require the resettlement of a portion of the employable population from the central regions to the east. A more rational utilization of the labor force will also require an intra-regional redistribution during the Seven-Year Plan period, in particular a shift from country to city.

It was thought until recently that the main means of attracting personnel to areas just being opened to economic development, and inducing them to remain, would be higher wage scales and a variety of additional monetary bonuses. Experience has shown however that high wages alone do not keep personnel in place. The majority of those who go to the eastern districts think of themselves as temporary residents and subsequently return home. Thus in the Kamchatka economic region, where the wage level is the highest in the country, labor turnover in 1957-1958 was 75% of the average total local labor force.

The main emphasis in attracting personnel to remote areas and keeping them there must therefore be on good living and cultural conditions. This means that the economy of these areas must undergo multi-faceted development. Along with branches of heavy industry it will be necessary to set up intensive agriculture, to develop light and foodstuffs industries and model public services to build housing on a large scale, etc.

The economic councils and the individual enterprises face a serious problem — that of improving the organization of labor so as to assure rational utilization of the working force, and also a reduction in the workday. Reduction in working time by a single hour, with the level of labor productivity remaining unchanged, would require an increase of not less than 1,700,000 workers in industry alone. It is quite obvious that successful implementation of these measures requires further rapid growth in labor productivity on the basis of improvement in the organization of the labor process and rational utilization of personnel. Conversion to the shorter workday in 1956-1960 has demonstrated that all the preconditions now exist for converting the vast bulk of our enterprises to the new work schedule without adding to the labor force.

Under conditions of socialist production, the eco nomy of congealed and living labor is an inviolable law of social development. Basing itself on this, our government distributes the country's labor force in a planned and rational fashion. The practical solution of related problems is of major importance to the further development of the socialis economy and the successful fulfillment of the Seven Year Plan.

Footnotes

(1) The article is being published to raise this question for discussion.

(2) Narodnoe khoziaistvo SSSR v 1959 godu. Sta tisticheskii iezhegodnik, Gosstatizdat, 1960, p. 584

(3) Spravochnye materialy po trudu i zarabotnoi plate, NII truda, Moscow, 1960, pp. 21-22.

(4) Cherkasov, G. N., Rabochee vremia pri sots ializme, Izd. Znanie, Moscow, 1960, p. 24.

(5) Marx, K., Teorii pribavochnoi stoimosti, t. I, p. 190, 1955.

Vestnik Statistiki, 1961, No.

A. KAZANSKII AND A. UL'IANOVA:

A Great Social Achievement (On the Results of the Transfer of Factory Workers and Office Employees of the USSR to a Shorter Working Day)

The program for the comprehensive building of communism in our country provided for the complete transfer by 1960 of factory workers and office employees to a seven-hour working day and workers of the leading professions engaged in work underground to a six-hour working day. This program, proclaimed in the historic decisions of the 21st Congress of the CPSU, contained many other exceptionally important measures providing for the further development of the Soviet economy and an improvement in the material well-being of the working people.

Guided by the decisions of the Congress, the PSU Central Committee, the Council of Ministers the USSR, and the All-Union Central Council of rade Unions passed a decision in September 1959 nich established specific dates for completing the ansfer in 1960 of all factory workers and office nployees to a reduced seven or six-hour working y.

This decision has been carried out. By January t, 1961, factory workers and office employees of l enterprises, institutions and organizations of e USSR had a seven-hour working day, and those 10 were engaged in work underground had a six-ur working day. Furthermore, in accordance th earlier decisions of the government, those en-ged in work under harmful conditions had a four five-hour working day, young people aged 16 to six hours a day, and those 15 years of age — 4 urs a day. It should be borne in mind that the ork of these youths is paid for as a full working y of workers of the respective categories. There e several other categories of employees (school achers, professors and instructors, doctors, edium level medical personnel, etc.) who so enjoy a shorter working day in accordance with ws passed previously.

The measures to reduce the working day were st put into effect in the fourth quarter of 1956. ie first to be transferred to a shorter working day ere those workers of the coal industry of the Don-s and Lvov-Volynsk coal basin. In 1957 the orkers and employees of the mining and coal-tar emical industries, of some of the iron and steel ants and of some factories of other industries ere shifted to a shorter working day.

In 1958 the shift to a shorter working day of orkers and employees of the coal and iron and eel industries, as well as of workers and employ-s of the majority of enterprises producing cement, ncrete and reinforced concrete products was com-eted. That year also marked the beginning of the ansfer to a shorter working day of workers and nployees of enterprises of non-ferrous metallurgy, e chemical, oil and gas industries, and also the achine-building and metal-working enterprises. ie transfer of the workers and employees of ese industries to a shorter working day continued 1959. In that year the railway workers began the ift to a shorter working day. By the end of 1960 e transfer of all factory workers and office em-oyees to a seven or a six-hour working day was mpleted.

As a result of the shifting of all workers and em-oyees to a shorter seven or six-hour working day, e average length of the work week established for workers and employees of the Soviet Union (bearing in mind that part of the workers and employees work seven hours a day and that some have a shorter working day) is 39.4 hours. (1)

The already achieved transfer of Soviet factory workers and office employees to a shorter working day is an important step towards the establishment in our country of the shortest working day in the world. The free time of the worker "for rest, for his development, and for the enjoyment of his rights as a human being, a family man, and a citizen" (V. I. Lenin, Collected Works, Vol. II, p. 276) was increased by one hour, and for some categories of workers, by two hours. In other words, the workers and employees transferred to a shorter seven or six-hour working day, received an additional 41-45 free days per year.

We can more profoundly understand and appreciate the true worth of this great concern of our Party and Government for the well-being of the Soviet people if we recall what the length of the working day was in pre-revolutionary Russia.

At the dawn of Russian capitalism, between 1860 and 1880, the length of the working day in the plants and factories of Russia was from 14 to 17 hours for adults and minors alike. In 1874 a permanent committee of a technical society compiled information obtained from 135 manufacturers of Russia on the length of the working day. This information showed that at most factories adults and children, some of whom were 10 years old, worked 15 hours a day, and at one factory — 17 hours a day.

E. M. Dementiev, in his book "The Factory, What It Gives the Population and What It Takes From It," presents the following figures about the length of the working day in 1884-1885, obtained for three industrial districts of Moscow province (Serpukhov, Kolomenskoe and Bronnitsy):

Length of Working Day	No. of Factories	As % of total
Less than 12 hours	26	10.0
12 to 12-1/2 hours	75	29.0
13 to 13-1/2 hours	114	44.0
14 to 14-1/2 hours	30	11.6
15 to 18 hours	14	5.4
Total	259	100.0

In 1884-1885 61% of all surveyed factories worked 13 or more hours a day, 29% worked 12 to 12-1/2 hours a day, and only 10% of the factories had a working day of less than 12 hours. Deducting the amount of time spent on breaks, the worker worked 12-14 and more hours a day, for which he received a meager wage.

Therefore throughout the history of the struggle of the Russian working class against the tsarist autocracy, the demand for a shorter working day was one of the basic economic and political demands of the workers.

At the end of the 19th and the beginning of the 20th centuries the tsarist government, under the pressure from the rapidly developing workers' movement, was frequently compelled to pass various laws which formally established a limit to the length of the working day and regulated some working conditions at factories and plants. But there were always reservations and exceptions to these laws which made it possible to reduce them to naught. V. I. Lenin, in his article "The New Factory Law," wrote that in tsarist Russia "any law that may be of the slightest benefit is invariably so wrapped up in red tape that its enforcement is endlessly delayed. More, the enforcement of the law is left to the complete discretion of officials who, as everyone knows, are ready heart and soul to 'serve' any moneybag and to play every possible dirty trick on the common people." (Collected Works, 4th Ed., Vol. 2, p. 264.)

As a result of the revolutionary events of 1905-1907 and the new upsurge in strikes in the years that followed, the Russian proletariat won a somewhat reduced working day. In 1913 the average length of the working day in large-scale industry, for both adult workers and adolescents, was 9.9 hours, and for minors -- 7.9 hours. But in small-scale industry and domestic industry the length of the working day was not regulated by any laws whatever and was much greater than in large-scale industry. In the World War I period the length of the working day for workers in large enterprises increased as compared to 1913.

Reduction of the working day has always been and remains one of the fundamental policy questions of the Communist Party. Among the first decrees of the Soviet Government signed by V. I. Lenin was the decree of November 11 (October 29) 1917, on the introduction of an eight-hour working day as the maximum working norm for adults, and a six-hour working day for juveniles. In the subsequent years the Communist Party and the Soviet Government passed a number of new laws regulating the eight-hour working day established by the decree mentioned above. In particular, workers of many trades with harmful working conditions were transferred to seven-hour and shorter working days. For nursing mothers additional paid breaks in their work were introduced to enable them to feed their children.

The restoration of the national economy after the imperialist and civil wars, the rise in labor productivity and the strengthening of economic leadership enabled the Party and the Government to further lighten the labor of the working people. In October 1927, on the occasion of the Tenth Anniversary of Soviet power, the Central Executive Committee of the USSR published a manifesto proclaiming the transfer, within the first five-year plan period, of workers of industry, railway transport, the public utilities and communications to a seven-hour working day, and workers engaged in work underground -- to a six-hour working day without any decrease in wages.

The measures provided for by the Manifesto were successfully carried out. In the years following the transfer of the workers to a shorter working day all branches of industries showed a considerable increase in gross output, labor productivity, and the wages of the workers.

On the eve of the Great Patriotic War, in view of the serious international situation, the Soviet Government was compelled, in June of 1940, to increase somewhat the length of the working day for factory workers and office employees. In particular, the working day was increased from seven to eight hours at enterprises with a seven-hour working day, and from six to seven hours at enterprises with a six-hour working day (with the exception of trades with harmful working conditions), and from six to eight hours for office employees.

In the post-war years the Soviet Government passed a number of new laws reducing the length of the working day (the working day was shortened on days before the day off and before holidays, a shorter working day was introduced for juveniles, and a number of privileges were established for working people who study in correspondence and evening higher and specialized secondary schools, etc.).

After overcoming the terrible losses which our country suffered from the bandit attack of the fascists, losses which were unprecedented in the history of warfare, the Soviet State succeeded in considerably advancing all branches of the national economy. This achievement was due to the great labor enthusiasm of the Soviet people and the wise domestic and foreign policy of the Communist Party Economic development provided the real basis which made it possible to raise the question of introducing a shorter seven and six-hour working day It is quite natural that this measure was first introduced in heavy industry, the coal industry, ferrous and non-ferrous metallurgy, the chemical, cement, reinforced concrete and other industries.

As a result of the transfer of the workers and employees of our country to a shorter working day, he average established working day for adults in in- lustry by the end of 1960 was 3 hours less per day han for workers in large-scale industry in 1913. This reduction is characterized for certain branches f industry by the following data (in hours)*:

	Average established length of working day of adult workers			Reduction in work hours in 1960 as compared with 1913
	1913	1956	At end of 1960	
For industry as a whole	9.9	7.96	6.94	2.96
Including:				
Ferrous metallurgy	10.1	7.98	6.96	3.14
Coal industry	10.1	7.94	6.30	3.80
Oil extraction industry	8.5	7.98	6.96	1.54
Production of electrical and thermal energy	8.7	7.98	6.99	1.71
Machine-building and metal-working	9.7	7.97	6.98	2.72
Chemical industry	9.6	7.74	6.78	2.82
Paper industry	10.0	7.97	7.00	3.00
Textile industry	9.6	7.98	6.99	2.61
Tanning and fur industry	10.0	7.99	6.99	3.01
Shoe industry	9.9	8.00	7.00	2.90
Food industry	10.8	8.00	7.00	3.80

* The length of the working day in 1913 is given for enterprises of large-scale industry. In small-scale industry and domestic industry, the length of the working day was not regulated by any laws whatever and was much greater than in large-scale industry.

The average length of the working day established or adult factory workers at the end of 1960 was .94 hours. If we consider the average annual workng time, i.e., if we take into account the shorter vorking day before days off and holidays and also he holidays in addition to the usual days off, the verage length of the working day for adult workers n industry amounts to 6.67 hours. The average ength of the work week for industrial workers is ow 40 hours.

There are two essential features that distinguish he transfer of Soviet workers and employees to a horter working day.

The first is that the shorter working day was introuced under conditions not only of absolute mainteance of the achieved volume of output and the level f labor productivity, but even of a further increase n production and a rise of labor productivity.

The rise in labor productivity and the increase in gross output simultaneously with the shortening of the working day are due to the great creative activity of the Soviet people. That is, by the fact that millions of people here take part in the effort for a maximum rise in labor productivity, and that millions of working people are interested in the mechanization of work, the automation of production, and the introduction of the most modern technological processes. The creative activity of millions of workers and employees can be most strikingly seen in the movements of entire enterprises and shock-workers of communist labor, mass-scale innovation, and the spread of socialist competition.

A number of economic and technical measures taken prior to the transfer of workers and employees to a shorter working day assured the fulfillment and over-fulfillment of the plan for output and labor productivity, and also helped lighten labor as much as possible. Among the chief measures taken were the wide introduction of new techniques, the modernization of lathes and other machines, the use of progressive, improved technology, and better repair of equipment. Furthermore, the mechanization of the production processes at a large number of enterprises was effected not only in the main operations, but also in the auxiliary ones which call for a great amount of manual labor.

During 1960 alone about 2,500 new, very important types of machines, mechanisms, apparatuses and other equipment were designed and made, as well as more than 500 new, very important types of instruments for the control and automation of production. During the year over 600 different designs of machines, equipment and instruments were removed from production as absolete. They were replaced with improved modern designs from among functioning types of machines and equipment and new types that had been mastered for the first time. Over 2,800 automatic, semi-automatic and mechanized production assembly lines were introduced into industry. About 70,000 metal cutting lathes and other equipment were modernized at the machine-building enterprises of the economic councils in 1960.

As a result of these measures labor productivity in industry per worker increased more than twofold in 1960 as compared with 1950, and by 13% since 1958.

The rise in the technical level of production and the systematic replenishment of industry with new machines and mechanisms has resulted in a considerable increase in recent years in the number of workers in many of the skilled trades. According to the data of the USSR Central Statistical Administration, the number of machine operators, motor-mechanics, lathe operators, electricians, and adjusters in industry in 1959 changed as follows since 1954:

	Number of workers (in thousands)		Number of workers in 1959 as % of 1954	Proportion of workers of the given trade as compared with the total number of workers in industry	
	On May 5, 1954	On August 1, 1959		On May 5, 1954	On August 1, 1959
Machine operators, motor mechanics, and their assistants	603.7	861.2	143	4.6	5.8
Lathe operators (turners, milling machine operators, turret lathe operators and others)	833.0	1081.1	130	6.3	7.2
Electricians, control panel operators	335.4	551.9	165	2.5	3.7
Testers and adjusters of automatic machines, lathes, other machines and mechanisms	76.9	133.9	174	0.6	0.9

The second most important feature of the transfer of workers and office employees to a shorter working day is that when this measure was taken the wages of workers and employees not only did not drop, but were even raised in branches where new higher rates and salaries were introduced. This is possible only in a socialist society.

The decisions of the 21st Congress of the CPSU provided that when wages were regulated, the wages of the lower and middle-paid workers and employees be raised in order to reduce the gap between the lower and higher paid categories of workers. During the seven-year period the wages of the lower paid workers and employees are to be raised from 27-35 rubles to 50-60 rubles a month. (3) These measures will be carried out gradually, in two stages.

In the years 1959-1962 (the first stage) it is planned to complete the regulation of wages of workers and office employees, which has already been begun, and simultaneously to increase the minimum wage to 40 to 45 rubles per month in all branches of the economy.

In the years 1963-1965 (the second stage) the minimum wage of workers and employees in all branches of the national economy is to be raised to 50-60 rubles a month, and the wages and salaries of middle-paid workers and employees will also be somewhat raised.

As a result of measures already taken to regulate the wages of factory workers and office employees, the number of people in industry who receive less than 60 rubles a month has become considerably less. For instance, after the regulation of the coal industry, in ferrous and non-ferrous tallurgy, and in the chemical industry, the num- of workers receiving less than 60 rubles a nth in wages dropped two to three times.

n all branches of the national economy the trans- of factory workers and office employees to a orter working day was effected without any drop wages. In industry and in a number of enterprises other branches of the national economy, where the nsfer of workers and employees to a shorter rking day was effected simultaneously with the gulation of the wage system, the earnings of the rkers and employees not only remained at the for- r level, but as a result of the introduction of new, her rates and salaries, they were raised, especi- y those of the lower-paid categories of workers. e average money wage of workers in industry in- eased by 17% (4) in 1960 as compared with 1955, l by 27% in the construction industry. The rise in average money wage of the workers in certain ustries can be seen from the following figures:

	Average wage of workers in 1960 as compared with 1955, in %
Vorkers of all industry	117
Including:	
errous metallurgy	112
oal industry	137
nachine-building and metal-working	113
ight industry	111
onstruction	127

As a result of the measures taken to regulate the ges of factory workers and office employees, the lerstated experimental-statistical production tas which were in wide use in industry for most es of work were replaced by technically substan- ed quotas. The proportion of technically substan- ed production quotas increased from 72 to 86% errous metallurgy, from 77 to 93% in non- rous metallurgy, from 52 to 60% in the chemical ustry, from 30 to 46% in machine-building and tal-working, and from 12 to 48% in bread-baking. t all enterprises where the transfer to the new ditions for the payment of work was effected, the es of pay and salaries were considerably in- ased. The wages of the less skilled workers e particularly.

Jniform wage scales were established for enterprises of one and the same branch. While the new wage scales retained considerable differences between the rate categories, they put an end to excessive differences between the pay of the higher and lower categories. For example, at the machine-building and metal-working enterprises the previously existing eight-category wage scale, in which the relation between the extreme categories was 1:2.4, 1:3.0, and 1:3.6, was replaced by a uniform six-category wage scale with a relation between the extreme categories of 1:2.0. In ferrous metallurgy instead of twelve and ten-category wage scales, ten and eight-category wage scales were introduced after the wages were regulated. In non-ferrous metallurgy a uniform seven-category wage scale was introduced after the wage system was regulated, instead of the ten, nine and eight-category wage scales. In the chemical industry a seven-category wage scale was introduced in place of the twelve, ten, eight and seven-category wage scales.

When the wage system for workers and employees in industry was regulated, new rate and qualification reference guides were compiled and the distribution of workers according to the forms and systems of payment for work was revised.

As a result of the regulation of the wage system, such forms and systems of payment for work were introduced as best stimulated a rise in labor productivity and afforded a material incentive to the workers. The piece-work progressive system of pay was wiped out almost completely, and was replaced by the direct piece-work or piece-work-bonus system. In a number of branches of industry in various production sections where the piece-work system of pay was not justified, payment on a time basis was introduced (mainly a time-bonus system). This led to a drop in the percentage of workers who were paid according to the piece-work system. For instance, the proportion of piece-workers in non-ferrous metallurgy dropped from 63 to 42%, in the oil-refining industry — from 63 to 12%, in the machine-building and metal-working industry — from 67 to 58%, in the textile industry — from 84 to 67%. At the same time the proportion of workers paid according to the piece-work-bonus system increased from 2 to 46% in the coal industry, from 8 to 41% in ferrous metallurgy, from 5 to 29% in non-ferrous metallurgy, and from 3 to 12% in machine-building and metal-working. The proportion of workers paid according to the time-bonus system increased from 40 to 77% in the oil-extracting industry, from 33 to 86% in the oil-refining industry, from 29 to 37% in machine-building and metal-working, and from 37 to 59% in the chemical industry.

Along with the introduction of the new pay system, the percentage of earnings based on the scheduled rates of pay in the total earnings of the workers considerably increased as a result of the rise in the wage scales and the fact that all sorts of wage stratifications were abolished. For example, the share of the scheduled rates of pay in the total wages of the workers increased from 56 to 77% in ferrous metallurgy for the first furnace attendants of the 10th category, from 58 to 75% for steelworkers of the 10th category, from 59 to 78% for shift mechanics of the 6th category. In non-ferrous metallurgy the respective figures are: from 54 to 82% for rolling press workers of the 6th category, from 51 to 73% for furnace attendants of the 6th category, from 57 to 76% for repair mechanics of the 6th category, and in the chemical industry from 66 to 82% for apparatus operatives of the 7th category, from 60 to 79% for those of the 6th category, and from 58 to 72% for workers on shop transport.

Below we present data for some of the enterprises of certain industries on the chief indices of production at these enterprises after the workers and employees were transferred to a shorter working day and to the new system of pay (the period prior to the regulation of the wages is given as 100%):

As a result of the transfer of factory workers and office employees to the new system of pay, the material interest of the workers in the results of their labor greatly increased. In all branches where the wage system was regulated simultaneou ly with a cut in the length of the working day outpu considerably increased, as did labor productivity and the workers' wages.

In the period immediately following the carrying out of the measures for the transfer of workers an employees to a shorter working day, in connection with the introduction of the new wage system, the rate of increase in wages in a number of branches of industry surpassed the rate of increse in labor productivity. At present the rate of increase in la bor productivity in all branches of industry as a rule exceeds the rate of increase in the wages of the workers and employees. This can be seen fro the table shown on the top of the following page.

After the shift to a shorter working day more favorable conditions existed for the workers to increase their knowledge and raise their qualifications, to study while continuing to work by attendin the general education schools for young city and agricultural workers, evening and correspondence

Branch of Industry	Periods	Number of workers	Gross Production	Labor Productivity per worker	Average wages of workers
Ferrous metallurgy					
before regulation	1st half of 1958	100	100	100	100
after regulation	1st half of 1959	104	110	106	107
Oil-extracting industry					
before regulation	2nd quarter of 1959	100	100	100	100
after regulation	2nd quarter of 1960	103	115	111	114
Machine-building and metal-working					
before regulation	3rd quarter of 1959	100	100	100	100
after regulation	3rd quarter of 1960	110	117	106	104
Building-materials industry (excluding cement and production of reinforced concrete and concrete articles)					
before regulation	3rd quarter of 1959	100	100	100	100
after regulation	3rd quarter of 1960	111	127	114	108
Production of reinforced concrete and concrete articles					
before regulation	1st quarter of 1958	100	100	100	100
after regulation	1st quarter of 1959	128	151	118	108
Tanning, fur and shoe industry					
before regulation	3rd quarter of 1959	100	100	100	100
after regulation	3rd quarter of 1960	109	111	102	106

elationship of the rates of increase of labor pro- uctivity and the average monthly wages per worker in various branches of industry of the economic councils in 1960 as compared with 1959

Branch of Industry	1960 as % of 1959	
	for labor productivity	for average monthly wage
ll industry	105	102
Including:		
errous metallurgy	106	101
on-ferrous metallurgy	109	102
oal industry*	106	102
il-extracting industry**	111	110
achine-building and metal-working	108	103
ight industry	104	104

* Extraction of coal per worker
** Extraction of oil per worker

gher and specialized secondary schools, evening hools, schools for professional and technical edu- tion, and other educational institutions.

In 1960 the number of people who, while continuing work, studied in the higher and specialized sec- dary schools, in the general education schools for ung city and agricultural workers, and also in hools for adults, amounted to almost five million. rthermore, in 1960 about ten million workers and nployees were taught new specialties and raised eir qualifications directly on the job.

In the period when the workers and employees ere transferred to a shorter working day there ose new ways for the workers to raise their tech- cal and general cultural level: instruction in peo- e's universities, acquaintance with the concrete onomics of various branches of industry, and the tension of lecture and group work at workers' ubs.

The shift of the workers and employees to a orter seven and six-hour working day, which was mpleted by January 1, 1961, is not the final stage reducing the length of working time. The 21st ngress of the CPSU decided to complete the trans- of workers and employees to a 40-hour work ek in 1962 and in 1964 to begin the gradual trans- to a 35 and 30 hour work week with two days off veek. When these measures are effected, the SR will have the shortest working day and the ortest work week in the world.

In his speech at a meeting of the builders of the Bratsk hydro-electric power station in October 1959, N. S. Khrushchev defined the prospects for the further reduction of the working day in the period of the building of a communist society. "The time is not far off when, on the basis of the further development of production, science and techniques and on the basis of technical progress and the automation of production the people of our country will work 3 and 4 hours a day," he said. "Man will contol intricate machines and mechanisms, and in this brief period he will produce considerably more products than he now does; this will ensure the greater satisfaction of the needs of the country and all the needs of every citizen of communist society."

The apologists for capitalism, in trying somewhat to support their fabrications about a change that is taking place in the nature of capitalism, its transformation into a sort of "people's capitalism," demagogically speculate on certain social achievements which the working class won through many years of stubborn struggle, exaggerate their significance in every possible way, and at the same time distort the general picture of the position of the working people in capitalist countries. In particular, a slight decrease in the absolute length of the working day in various countries during the past decades, despite what the bourgeois economists write about it, is by no means evidence of a lightening of labor inasmuch as the reduction in the length of the working day is accompanied by an increased intensification of labor.

According to the latest published data, the actual average length of the work week in England is 46.7 hours and in France — 46.1 hours.

In the USA there is a law about a 40-hour week. But the law does not restrict the use of overtime work, and if an employer finds it profitable to do so, he can compel a worker to work beyond the established time merely by paying him additionally for the work done above 40 hours a week. It must also be pointed out that in the USA, where there is chronic unemployment of millions of workers, it is a widespread practice to employ people for a lesser number of hours per week with correspondingly lower wages. For instance, according to a selective poll by the Census Bureau, in June 1959, 50,220 workers and employees of non-agricultural branches aged 14 and older were distributed by length of their work week as shown in the table on the following page. (5)

Thus 49.8% of the workers and employees in non-agricultural branches in the USA in 1959 had a 40-hour work week, 21.9% worked less than 40 hours a week, that is, actually they were partially unemployed, 28.3% worked more than 40 hours a week,

Length of work week (in hours)	Number of workers as % of their total number	Length of work week (in hours)	Number of workers as % of their total number
Up to 14	5.0	40	49.8
15-21	3.8	41-47	8.3
22-29	3.5	48	7.5
30-34	3.5	49-54	4.9
35-39	6.1	55-59	2.2
		60 and over	5.4

and 12.5% worked more than 48 hours a week.

As regards the position of the working people in the colonial and semi-colonial countries, it is much worse than that of the workers and employees in the so-called "civilized" capitalist countries.

In the USSR, in contrast to the capitalist countries, a cut in the length of the working day is not accompanied by an increased intensification of labor. The rise in labor productivity is achieved in the main by mechanization and automation of production, by production training of the working people, and a rise in their cultural and technical level. There is no unemployment in the USSR. On the contrary, the number of workers and employees engaged in the national economy increases every year. In 1960 the average yearly number of workers and employees in the national economy amounted to 62 million people, as against 10.8 million people in 1928, 31.2 million in 1940, and 48.4 million in 1955. The increase in the number of workers and employees in the national economy in 1960 as compared with 1959 was 5.5 million people, of which number 1.4 million were members of producers' cooperatives which were transferred to the system of state enterprises.

The real incomes of Soviet workers and employees are constanty lincreasing. In 1960 they had increased 2.1 times as compared with 1940. The real incomes of industrial and construction workers in 1960 had increased 5.8 times since 1913, the liquidation of unemployment and the reduction in the length of the working day being taken into consideration.

The cut in the length of the working day is a most important social achievement of the working people of the USSR. Once again the Soviet Union has demonstrated to the entire world the great advantages of socialism over capitalism.

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Footnotes

(1) The figures quoted are determined on the basis of the annual amount of working time, i.e., taking into account the shorter working day on days preceding the day off and holidays, and also the holidays themselves which are in addition to the regular day off.

(2) E. M. Dementiev, "Fabrika, Chto Ona Daet Naseleniiu i Chto Ona u Nego Beret," Moscow, 2nd Ed., 1897, p. 90.

(3) Here, as elsewhere, the wages are given in terms of the new currency.

(4) This does not include enterprises of producers' cooperatives transferred to the system of state enterprises in 1960.

(5) Compiled from Current Population Reports, Series, p. 57, No. 204.

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COMPARISONS OF SOVIET AND US ECONOMIES

Voprosy Ekonomiki, 1961, No. 2

KUDROV:

nti-Scientific Methods Employed by Bourgeois Economists

Compare the National Incomes of the USSR and the US

The question of comparing the national incomes of e USSR and the US assumes great significance in e period when the USSR has entered the decisive ıge of economic competition with capitalism. The tional income is the most important synthetic in- x of a country's economic power, standard of liv- g, and economic structure, as well as the pro- essiveness of the social system from the point of ew of utilization of resources and rates of econom- growth. But in order to compare the national in- mes of the USSR and the US the same methodology ıst be employed for measurement. The problems calculating the US national income by the method ed in the USSR have been frequently raised in our ess.

Bourgeois economic literature devotes much at- ition to the comparative analysis of the national comes of the USSR and the US. The questionable rks of Bergson, C. Clark, Hoeffding, Wyler, Seton, les, etc. have achieved a certain renown in the st. As the British economist Kaiser correctly ob- rved, "most doubtful are the calculations (of bour- ois economists — V. K.), that try to present data the USSR national income for international com- risons." (1)

The problem of comparing the national incomes of USSR and the US was also taken up by the Joint onomic Committee of the US Congress, which ranged a series of special sessions to this subject the end of 1959. The American economists Born- in and Boddy spoke on the matter of the national omes and products of the USSR and the US. "The purpose of this paper," Bornstein writes, "is make selected comparisons of the structure, size, l growth of the national products of the USSR and United States." (2) This problem is very im- rtant, indeed, and is of serious scientific interest. us see, however, the way in which it is being solved by American economists.

Whereas Marxist political economy defines the national income as new value created in the sphere of material production, the component part of the aggregate social product that remains after deduction of the compensation fund, bourgeois economic science regards national income as a simple sum of the incomes of individuals and enterprises. The American economist S. Kuznets writes that the national income constitutes "the net income from the economic activity of individuals, firms, social and political institutions, which in their entirety form the nation." (3) Bourgeois economic science includes any form of activity in the sphere of production as long as it satisfies someone's needs and yields income. Experts of the UN Social and Economic Council point out that in capitalist countries the concept of production "encompasses, in principle, all kinds of activities aimed at satisfying human needs." (4) Giving a broad interpretation to the concept of production, and thereby confusing it, bourgeois economic science in essence does not differentiate between productive and non-productive labor. The head of the Cambridge school of bourgeois political economy, A. Marshall, wrote that "it is best to regard all labor as productive, with the exception of labor which fails to achieve its intended purpose and, consequently, does not produce anything useful." (5) As a result, the bourgeois conception of national income confuses the productive and non-productive spheres, productive and non-productive labor.

In making comparisons with the USSR, American economists use not only the index of national income, but also the national product index. Bourgeois economists conceive of the national product as the aggregate of finished goods and services. Actually this is national income by end use plus indirect taxes, which are automatically reckoned together with the price. The national product is called "gross" or "net" depending on whether or not

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All quotations from English sources have been re- nslated from the Russian. — Ed.

it includes the sum of depreciation of fixed capital (amortization). The national product breaks down into the consumption fund and the accumulation fund (in the gross product — the capital investment fund) and is tied in with the national income index.

When comparing the economies of the USSR and the US, bourgeois economists usually employ the gross national product index, inasmuch as it enables them to determine fairly exactly, by definite kinds, the entire mass of goods comprising the national product. The relation between national products of the two countries is roughly the same as that between their national incomes. However, the country with greater fixed capital will always have some advantage if the gross product, which includes amortization, is used.

In their comparative analysis of the Soviet and US national incomes and products, American economists have measured the Soviet national income and product according to the method accepted in the United States. However, they have not familiarized the reader with the primary sources of their statistical calculations. Therefore, we do not know, in effect, how they obtained their calculations, and it is very difficult to trust them. But it is clear that these calculations are based on the anti-scientific bourgeois theory that the national income is a simple arithmetic total of almost all the incomes received by the population, and that the national product is the sum total of expenditures on goods and all kinds of services. Such an interpretation of national income and national product distorts their true magnitudes, structure and dynamics, since in the calculation of these indices there are included not only the basic incomes generated in the sphere of material production and expenditures for goods and material services, but also derivative incomes and expenditures for personal services, as a result of which there is repeated double counting. Thereby, the total size of the national income and national product is significantly over-stated, and their structure and dynamics are presented in a distorted light. Bourgeois theory sees no difference in principle between personal and social income, personal and social expenditure. Bourgeois economists regard service in the army and the police, services, judicial proceedings, religious services and even the ownership of houses and other immovable property as "production", contribution to the country's national income. It goes without saying that the services of the army and the police, of judges, etc., are of unquestionable value for the bourgeoisie, but what has this to do with the creation of national income? After all the national income is an indicator of a country's strength and well-being. And no country has yet become richer by diverting people from occupations in the sphere of material production to service in the army, the church or other non-productive occupations.

The anti-scientific bourgeois interpretation of national income and the national product meets with objections from bourgeois scholars also. Thus, the contemporary American economist Roy Foulke writes that "the aggregate income of all individuals is not the national income....An opera singer is paid for singing, a surgeon is paid for performing a difficult operation. Their remuneration is a part of the aggregate income of all the country's individuals, but since their services do not add anythin to the national wealth, their incomes can hardly be a part of the national income.... To believe our national income experts, it would seem that it is a matter of indifference to society whether one quarter of the population is engaged in the production of wealth and three quarters in the production of services or three quarters are engaged in the production of wealth and one quarter in the production of services.... But this is very difficult to comprehend both from the viewpoint of logic and of economic science." (6) Characterizing ironically the bourgeois interpretation of national income and national product, another contemporary American economist, Stanley Lebergott, writes: "how will people comparing gross national products be able to understand why one country has a greater 'economic power' than another, if their calculations include a greater complex of the financial system (a larger degree of control, a greater number of services rendered by financial intermediaries), high interest rates (a bigger total of paid interest), a greater scale of litigation (a higher quantity of lega services) and a larger number of people concerned with the future (large expenditures on life insurance)?" (7)

Therefore, inclusion of redistributed incomes or expenditures on personal services in the index of national income and product, as calculated by the bourgeois method, results in an exaggeration, when comparing the two countries, of the economic strength of the one that has a large government staf a large financial banking apparatus, a huge army, an advertising business, "services," etc. This is why the bourgeois method of measuring the Soviet national income for the purpose of comparing it with that of the US cannot be regarded as scientifically correct. In this case the Soviet national income will inevitably be greatly understated relativ to that of the US because the proportion of the nonproductive sphere in the USSR is much smaller tha in the US. This is acknowledged also by the American economist Bornstein. He writes that the share of services and trade in the national income of the

R, calculated by the American method, amounts 1.3%, as against 48.2% in the US national income.

But this is not the only reason, though it is the ic one, for the relative exaggeration of the US onal income and the understatement of Soviet na- al income.

is common knowledge that the index for US na- al income includes part of the national income ther countries. This appropriation of the prod- of other countries occurs as a result of non- ivalent trade exchange and the export of capital. s international redistribution of incomes finds tial reflection in the balance of income from for- n operations (rest of the world) and in the US bal- e of payments. The national income of the USSR ually reflects only the output of domestic produc- . However, American economists for some rea- , have not scaled down the national income of the ted States so as to make it comparable with the iet national income. But even if they were to rid r index of double counting and of redistributed in- nes from other countries, it would not, strictly aking, make the two national incomes completely nparable, since differences in the social systems he two countries are not taken into account. The umes of production in the USSR and the United es cannot be compared mechanically, because products of labor are used differently in the two ntries and have a dissimilar effect. The so- ist system permits a more effective use of the onal income, and, therefore, the Soviet Union , indeed, catch up with the United States as re- ds economic strength even with a somewhat aller national income. For example, the Soviet on will not have to overtake the United States in output of luxuary items or advertising facilities.

ince it is not the production but the end uses of national income that are usually compared, the stion of the effectiveness of this use assumes at significance. There are non-productive ex- ditures of the national income in the USSR as re are in the United States. To make the indices the two countries comparable, it is therefore essary to reduce somewhat the American figure. s known, for example, that some 31 billion dol- s are spent on luxuries in the United States and e than 10 billion dollars on advertising. Fur- rmore, other smaller non-productive outlays are le annually from the American national income.

n the other hand, in comparing the national in- nes of the USSR and the United States, we must make several corrections in the national in- ne of the USSR. For instance, it is necessary to ninate a definite underestimation in the evalua- of the means of production going into Depart- t I, whose value is not reflected fully in the wholesale price and is not compensated for in the prices of consumers goods.

Of substantial importance in comparing the national incomes of the USSR and the United States is the analysis of the economic structure of the two countries.

The American economist Bornstein furnishes the following table, characterizing the economic structures of the USSR and the United States in 1955 by their national incomes (in %).

	USSR	US
Industry and construction	36.6	40.7
Agriculture	27.1	4.6
Transportation and communications	5.0	6.5
Services and trade	31.3	48.2
Total national income	100.0	100.0

Since American economists incorrectly interpret the concept of national income, their calculation of the economic structures of the USSR and the United States must also be regarded as incorrect. Utilizing official American statistical data on the realization of the US national income by branches, we have determined the range of incomes created in the sphere of material production. As a result, we now have figures that are more or less comparable to the index of the Soviet national income. Having then calculated the proportions of the individual branches of material production, we have obtained the following data on the branch structure of the national incomes of the USSR and the United States in the pre-war year of 1940 and the post-war year of 1955 (in %). (See table shown on following page.)

These figures show that industry accounts for a large share in the structure of both the Soviet and US economies. Noteworthy are the approximately equal proportions of industry and construction. These common features are determined by the fact that both countries have highly developed productive forces, a complex, diversified economy, huge territories, large deposits of various useful minerals. However, the production of agriculture in the USSR is much higher than in the United States, while the share of trade in the United States is considerably larger than in the Soviet Union. In both countries the share of industry tends to increase, and the proportion of agriculture — to decrease.

Bornstein's calculation of Soviet national income

	1940		1955	
	USSR	US	USSR	US
Industry*	50.2	48.3	54.0	53.0
Agriculture	29.7	11.3	23.0	7.2
Construction**	5.3	4.4	8.0	7.3
Freight transportation and communications for productive purposes	3.5	7.5	—	5.9
Trade	7.5	24.6	15.0	23.1
Other branches	3.8	3.9	—	3.5
Total national income	100.0	100.0	100.0	100.0

* In the "Industry" section the figure for the US, as distinct from that of the USSR, does not include forestry and fisheries (they are included with agriculture).

** Only contractual construction is given for the US.

in dollars and US national income in rubles is of great interest. This method of measuring national incomes in one currency may be called the method of calculating the index of the purchasing power of currencies for commodity groups. The essence of this method is the grouping of data on the end use of the Soviet and American national incomes by identical commodity groups and the deducing of value ratios for each group. The consumption fund, for instance, is broken up into the following groups: bread and bread products, meat, fish, milk and milk products, fats, footwear, clothing, etc. The accumulation fund (or the capital investment fund, if we are dealing with the gross national product) is divided into commodity groups by types of new equipment and construction.

A representative commodity or aggregation of commodities is selected and a price index drawn up when determining the currencies' purchasing power for individual commodity groups. The proportions of the selected commodities, calculated according to the structure of the national income's end use in the two countries, are employed as the weighting basis. Consequently, two indexes are drawn up every time. All the indexes for the individual commodity groups are aggregated to obtain indexes of the purchasing power of currency for the chief components of the national income (consumption and accumulation funds) and for the national income as a whole. This calculation is done both in dollars and rubles.

The question arises, however, in what currency should the calculations be made — in rubles or dollars? Regardless of the differences in structure of the end use of the national incomes of the USSR and the US, evaluation of the comparable indices in rubles is especially affected by the structure of prices in the USSR and the evaluation in dollars is especially affected by the structure of prices in the United States. Under capitalism ther is a definite inverse relationship between the structure of the physical volume of production and the price structure of the produced commodities. Wit insignificant exceptions, the most popular and repr sentative goods on the market are usually relative ly low priced. In other words, the higher the productivity of labor and the output of a given commo ity, the lower its price. Marx wrote in this conne tion that "cotton, potatoes and spirits are the mos wide-spread consumers' goods... Why are cotton, potatoes and spirits the cornerstone of bourgeois society? Because their production requires the minimum amount of labor and they have, for this reason, the lowest price." (9)

When we convert the Soviet national income, let us say, into dollars, the inverse relation between price and volume of production, characteristic of one country, often becomes a direct ratio. For in stance, the USSR produces considerably fewer ca than the United States, but the price of an automobile in the US is relatively lower than in the USSR So, if we value all the cars produced in the USSR during one year in dollars, the resulting figure w be very small. But if we attempt to express Ame can car output in rubles, the figure will be unwarrantedly large. In general, when the Soviet and U

onal incomes are calculated in rubles, US na-
al income will be overestimated, because its
ucture includes a high proportion of durable goods,
ch are expensive in our country, and a compara-
ly low proportion of food products, which are
ap in the USSR. This makes clear why the Amer-
n economists love to calculate comparitively So-
and US indices in rubles. It turns out, accord-
to their data, that the ratio of the Soviet and US
onal products, calculated in dollars, was 53.4:100
955, and if calculated in rubles, only 26.8:100. If
first figure is to some extent, close to reality,
second is nowhere near it.

e hold that a comparison of the national incomes
he USSR and the US should, from a methodologi-
standpoint, be done in dollars, and if Soviet
ces in rubles are used a number of important cor-
tions must be made.

he Soviet Union has a specific system of price
nation differing from that of the United States,
the law of value is not at all a regulator of pro-
tion. As rightly pointed out by Ia. Kronrod, "the
e rate of accumulation in the USSR is higher than
t follows from the adduced index (one fourth of
national income). The current prices of means
roduction deviate, and substantially, below value,
le those of consumers' goods are above it. Since
accumulation fund is largely formed from the
ns of production, and the consumers' fund is
ned completely from consumption goods, the ac-
ulation fund, if measured according to the mass
alue in relation to the value of the national in-
e, would be of a considerably bigger magnitude."

ruble evaluation of the US national income, on
other hand, would greatly distort its structure.
e the accumulation fund in the national income
he United States is comparatively small, it would
ome still smaller if expressed in rubles, be-
se means of production in the USSR are priced
w value. And, on the contrary, the share of the
sumers' fund in the national income of the United
es, if expressed in rubles, would be greatly in-
ed, since prices for consumers' goods in the
R are above value.

hus the calculated ratio between the US and So-
national products, made by American econo-
ts in rubles (100:26.8), is absolutely incorrect.
ratio they have calculated in dollars — 100:53.4
s nearer to the truth. However American econo-
ts use neither of these figures; they take an
rage of 37.8%. That is, they allege that in 1955
et national income was 2.6 times smaller than
of the United States. This is also wrong, be-
se in 1955 the relation of the national incomes of
wo countries was close to 100:50.

Calculations show that in 1959 the ratio of the national incomes of the USSR and US was approximately 100:60. Consequently, if the Soviet national income equalled 1,350 billion rubles, the national income of the United States amounted to 2,254 billion rubles (according to the old price scale). According to our estimations, the 1959 US national income, free of double counting, amounted to 305 billion dollars (including indirect taxes for the sake of comparison). The Soviet national income, expressed in dollars, then equalled 183 billion dollars.

If we take the ratio of the 1959 national incomes of the two countries (100:60) as the basis, and extrapolate it for the next few years in accordance with the official indices, we obtain the following ratio dynamic: 1955 — 100:46; 1956 — 100:50; 1957 — 100:53; 1958 and 1959 — 100:60.

This series can be continued for the subsequent years also. According to the Seven-Year Plan, the national income of the USSR will increase on the average by 7.4% per annum. However, in 1959 the national income of the USSR rose by 8%, in 1960 it also grew by 8% and will rise by 9% in 1961. Consequently, it can be expected that the national income of the USSR will rise at a rate of not less than 8% per year in the next decade. The growth rate of the US national income will hardly be above 2.5% per annum. (11) If we take the 1959 ratio of the two national incomes as the base and project the indicated growth rates to subsequent years, the USSR will overtake the United States in the total volume of national income in 1969.

It is an old story that American economists try to "prove" that the official figures on the dynamics of the Soviet national income are overstated. In this effort they again resort to every possible statistical substitute of their own creation. For instance, the selfsame Bornstein asserted that if the official figure for the growth of the Soviet national income in 1950-1958 is 129% (mean annual rate — 10.9%), the actual rise amounts to 70% (mean annual rate — 7.9%) as against 25% in the US (mean annual rate — 2.9%). But even if we proceed from Bornstein's figures, it must be acknowledged that the national income of the USSR is growing roughly three times faster than that of the United States. Bornstein himself writes in this context: "The general conclusion indicated by these comparisons is striking. Even if allowance is made for the possibility of some overstatement of the Soviet growth rate, it is clear that Soviet national product has grown much more rapidly than US national product." (12)

However, even these calculations of Bornstein can hardly be considered correct. Thus, in drawing up his growth index for Soviet national income, Bornstein takes growth indices of separate branches of the economy and weights them according to structure of Soviet national income he himself has calculated. He makes the reservation, of course, that "this calculation must be regarded as very rough because of the great difficulties involved in establishing proper branch weights, and because an index for gross output rather than for net output has been used." (13) We think that this reservation is too cautious and mild. It would be more correct to say that Bornstein's calculation will not do at all.

For individual sectors of the Soviet economy Bornstein used indices constructed by various bourgeois economists instead of the official Soviet indices. For instance, the growth index for Soviet industrial production is taken from the works of the American economists D. Shimkin and F. Leedy, and the growth index for agriculture from the works of Johnson and Kahan. However, there is no basis for trusting their calculations. Bourgeois economists do not have at their disposal primary materials and, what is more, they deliberately distort the true picture, "fighting against Soviet rates of growth." Incidentally, the American economist Hans Heymann was compelled to say the following as regards the bourgeois estimates of the Soviet industrial output index: "The reliability of such indexes is inevitably impaired by our inability to achieve a representative product coverage relative to the total product mix and by the impossibility of knowing for sure what weights it would be proper to attach." (14)

Moreover, the weight system used in Bornstein's calculations is incorrect. We have already indicated that his calculation of the structure of Soviet national income distorts the actual state of things. Moreover, this distortion of structure was weighted according to the gross output indices, rather than the indices for gross output, which is also wrong from the standpoint of methodology if we are dealing with the dynamics of national income.

The question is, why is it that American economists resort to worthless methods when studying such an important question as the comparison of Soviet and US economies? Obviously, the monopolitic bourgeoisie of the US is afraid of losi the economic competition between the USSR and th US. Therefore, the bourgeoisie and its spokesme — the American economists and statisticians — take measures to bar the truth about the Soviet Un ion's economic successes from broad sections of the American people.

Footnotes

(1) Economic Journal, March 1957.

(2) Comparisons of the United States and Sovie Economies. Part II, Washington, 1959, p. 377.

(3) S. Kuznets, National Income. A Summary Findings. New York, 1946, p. 1.

(4) Materials of the UN Economic and Social Council, ME 375/58.

(5) A. Marshall, Principles of Economics. Vo II, London, 1909, p. 134.

(6) Roy A. Foulke, A Study of the Concept of National Income. Dun and Broadstreet, Inc., USA, 1952, pp. 17, 35.

(7) American Economic Review, June 1955, p. 440.

(8) Comparisons of the United States and Sovie Economies. Part II, p. 383.

(9) K. Marx and F. Engels. Soch., Vol. 4, 2nd Ed., p. 97.

(10) Ia. A. Kronrod, Obshchestvennyi Product i ego struktura pri Sotsializme. Gospolitizdat, 1958G, str. 471.

(11) In the period from 1953 to 1957, which is accepted as "normal" for the economic developme of the US, the mean annual rate of growth of the na tional product amounted to 2.2%. We, however, al low for a somewhat faster rate. Moreover, it mu be expected that the mean annual rate of growth o the Soviet national income will exceed the planne figures.

(12) Comparisons of the United States and Sovi Economies. Part II, p. 391.

(13) Ibid., p. 390.

(14) Ibid., p. 6.

WESTERN ECONOMIES AND ECONOMIC THOUGHT

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OLDAK:

oward a Critique of the Modern Keynesian Concept
the Business Cycle

he problem of the business cycle occupies a cen- l place in bourgeois economic literature of the h century. Hundreds of monographs, pamphlets l articles are concerned with this problem. Intro- ing the Soviet reader to some of the most funda- ntal of these will contribute to the development of all embracing criticism of bourgeois ideology ed on a more profound analysis of the processes work in the economy of modern capitalism.

n this connection the publication in Russian of siness Cycles and National Income by Alvin nsen, a professor at Harvard University (USA), is oubtedly of interest. (1)

Iansen is one of the most venerable representa- es of contemporary bourgeois political economy the acknowledged leader of American Keynesian- . He has written a number of works concerned h the problem of the business cycle: Business- cle Theory, its Development and Present Status 27), Financial Policy and the Business Cycle 41), Economic Policy and Full Employment (1947), siness Cycles and National Income (1951) and The erican Economy (1957).

he book Business Cycles and National Income is uestionably the most significant of these works; nost fully expounds the theoretical and methodo- cal principles of American Keynesianism.

ansen has fully embraced the fundamentals of Keynesian concept of the business cycle. At the ne time he sought to present a more consistent popular exposition of this concept in his works. eynes' The General Theory of Employment, In- est and Money was intended for a narrow circle rudite economists, Hansen's Business Cycles National Income was written for a broader sec- of readers.

he position of the American Keynesians, in- ding Hansen, is peculiar not so much for their tment of the business cycle problem as for their raisal of the methods of state regulation of economic activity. Keynes and his British followers regarded state control of credit and private investment as the principal levers for influencing the business cycle. American authors for the most part are very restrained in their expectations for these factors. They attach decisive significance to the role of state investments. This was made expecially clear in the postwar studies, clearly written under the influence of the prodigious military expenditures of the American government during World War II and the subsequent period.

Hansen's Business Cycles and National Income covers that range of problems concerning reproduction which trouble boureois economic thought most of all at present. This range includes, above all, an analysis of the factors determining the cyclical development of production, a search for recipies for regulating economic activity, and the problem of national income and employment.

Hansen examines in great detail the modification of the bourgeois concepts of the business cycle — from the work of Lord Lauderdale and Malthus up to the theories of the mid-twentieth century. In this analysis he is essentially interested only in those authors whose ideas later formed the basis of the Keynesian concept of the cycle. For this reason Hansen does not examine the views of Smith and Ricardo, the classics of bourgeois political economy. He scarcely touches upon the theories of Say and Sismondi, but he makes a considerable effort to determine who first introduced the terms "crisis", "depression" and "cycle" in economic literature.

The Marxist theory of reproduction and crises has been left out of Hansen's book altogether. Two quotations from Marx are given with the definite intention of creating an appearance of objective analysis and not at all with a view to stating the essence of the Marxist theory of the economic cycle. As a champion of the bourgeois system, Hansen naturally rejects the Marxist theory. At the same time he tries to create the impression that Marx's analysis of the movement of fixed capital coincides with the concept put forth by the French bourgeois economist Aftalion. This identification must be emphatically rejected. There is a difference in principle between the position of some bourgeois economists (Aftalion, Tugan-Baranovsky, Hansen and others), who attempt to deduce cyclical fluctuations from the dynamics of the replacement of fixed capital, and Marx's doctrine, which has shown that the ultimate cause of the economic cycle is the basic contradiction of capitalism — the contradiction between the social nature of production and private capitalist appropriation. It is this contradiction, directly manifesting itself as a contradiction between the growth of production and limited purchasing power, which determines the dynamics of investment. Bourgeois economists have never been able to understand or acknowledge this genuinely scientific analysis.

Though Hansen's historical survey is obviously one-sided and therefore hardly reflects the actual development of the business-cycle theory, this survey is of definite interest to the Soviet reader since it enables him to trace the sources of the Keynesian theory.

Hansen's survey confirms, for example, that the Keynesian analysis of the consumption function is nothing else but a modernized exposition of the views expounded by Lauderdale and Malthus at the beginning of the 19th century. The theory of investment is mainly a reproduction of the general results obtained by Tugan-Baranovsky, Wicksell, Spiethoff, Schumpeter and Cassel. The analysis of the role of credit and monetary factors goes back to Hawtrey and Hayek, while the theory of psychological factors is traceable to Mills, Marshall and Pigou.

Though Hansen claims that "Keynesian economists did indeed represent in some respects a revolution in economic thinking," (2) an altogether different conclusion suggests itself even from the material presented in his book. Keynesianism is an attempt to adjust bourgeois political economy to the conditions of modern capitalism by amalgamating very different concepts and trends. But it has not, nor could it have, offered a scientific solution of the problem of reproduction, any more than the preceding trends of the vulgar school of bourgeois political economy.

Hansen defines the business cycle as a fluctuation in national income, prices and employment. (3) He does not try to conceal or underestimate the significance of these fluctuations. His data clearly show that throughout the first half of the 20th century "cyclical fluctuations" continued to shake the economy of the capitalist countries and indeed developed into the crisis of 1929 to 1933, the gravest in the history of capitalism. (4)

Hansen begins his analysis of the business cycle by considering the multi-cycle theory widely current in modern bourgeois literature. According to this theory, several types of fluctuations may be discerned in the undulating movements of the capitalist economy: 1) "major cycles," often referre to as the Juglar cycles, which last from 6 to 13 years; in Hansen's view they are caused by the peculiarities of investment in fixed capital; 2) "minor cycles," or the Kitchen cycles, which last from 3 to 4 years and are set going, in Hansen's opinion, by the fluctuations of investment in inventories; 3) the so-called Kondratiev cycles, "long waves" of vigorous expansion which last for about a quarter of a century and are followed by "hard times" of the same duration. One cause of these cycles, according to bourgeois economists are "secular fluctuations" in the pace of technical progress.

To this scheme Hansen adds still another type – the building cycle by which he means special wave like movement in building construction which last "much longer than that of the major business cycle (5)

Hansen attempts to explain the peculiarities of the cycles of the end of the 19th century and the first half of the 20th century, and particularly the cycles which ended in the deepest crisis of 1929 to 1933, in terms of the multiplicity of economic oscillations and their various interactions. Far from typifying the growth of capitalist contradictions, th latter crisis, in Hansen's view, is merely an accidental coincidence of the phases of the major and construction cycles.

It is not difficult to discern the apologetic purport of these concepts. They are obviously employed to remove the problem of the social nature of the business cycle.

Characteristically, the bourgeois economists themselves cannot agree as to the length of the sc called "minor cycles." As for the "long waves," even in Hansen's opinion, "we must take at least a agnostic position, indeed if not a highly sceptical one" (6) with respect to this theory.

The construction cycle theory enunciated by Ha sen himself is likewise completely untenable. Th dynamics of the level of construction has its spec fic features which no doubt have to be studied. Y it should be borne in mind that construction is on of the leading spheres of industrial production. It cannot have fluctuations in its level of activity whi are independent of, still less opposite to, the gene ral business cycle.

The multi-cycle theory has in fact led to the id business cycles have neither regular periodicity genuine universality. (W. Mitchell, D. Duprise, [aberler and others). This theory has been logi- y consummated in the papers of I. Ackermann, itten and others who have urged the rejection of very concept of the cycle.

should be recognized that Hansen himself is ng way from such extreme judgments. Further- e, except for his historical survey, his entire ysis is actually devoted to explaining the nature ne "major cycle," i.e., the only type of cyclic tuations which really exists in the capitalist nomies.

ow does the Keynesian theory explain these fluc- ions? It should be noted that nowadays one rare- omes across pronouncements like those which ons once put forth (attempting to prove that busi- s cycles depend on solar radiation cycles) or ıments in the spirit of purely psychological ry (vainly striving to account for a crisis by un- ified optimism and for a depression by equally stified pessimism). Even the exponents of the etary theory do not venture to come out solely arguments borrowed from the analysis of the lit-monetary nexus. On the one hand, the un- ıdness of such concepts is becoming evern more r (notably as a result of the accumulation and tment of statistics) and, on the other hand, the of factors connected directly with the capitalist e of production is becoming more evident. Mod- bourgeois economists therefore make increasing of the thesis of the primary role of investment tuations.

his is reflected in Hansen's book also, which, pite all reservations, attaches decisive signifi- ce to the movement of investments. "...The ses of business fluctuations are to be found main- the factors which bring about a rise and fall in rate of real investment," (7) he says.

ecognition of the primary role of investment ements is a definite advance from the treatment e most superficial phenomena to a study of some e profound processes. Had representatives of Keynesian school continued their analysis along e lines they would ultimately be bound to arrive recognition of the connection between invest- t activity and the development of the inner con- ictions of the capitalist mode of production. Yet path of ascent from phenomenon to essence is ed to bourgeois scholars. Lacking scientific epts of the historical process of development of ety, they could not solve the problem of capital- eproduction. Therefore, it is no surprise that, ng taken investment fluctuations as the starting t of their analysis, the modern exponents of geois political economy did not proceed along the line of ascertaining the inner factors determining these fluctuations, but from the outset tried to connect these movements with artificial and clearly empty psychological categories.

Attributing decisive significance to the dynamics of investment, the Keynesians have been seeking to discern the factors influencing the rate of private investment, the so-called investment determinants. They have "discovered" two principal "determinants": the marginal efficiency of investment and the rate of interest.

The marginal efficiency of investment is conceived of in modern bourgeois literature as the rate of expected return on invested capital. (8) According to the Keynesian theory, demand for private investment will directly depend on the ratio between the level (or schedule) of the marginal efficiency of investment and the rate of interest. "The inducement to invest will be strong to the degree that the value of a capital good exceeds its cost — which amounts to the same thing as saying that the marginal efficiency of investment exceeds the rate of interest," (9) Hansen writes.

Taking this formula as the point of departure, the Keynesians first of all searched for the factors influencing the marginal efficiency of investment. Keynes, who is responsible for raising the problem, concentrated on an analysis of psychological factors. He maintained that "... the marginal efficiency of capital... depends on the prospective yield of capital." (10) The estimate of this profit or the calculations for the remote future are profoundly subjective. The market of investment is, in his opinion, influenced by the mass psychology of uninformed individuals and is subjected to the influence of changes of optimistic and pessimistic moods. (11)

Before long, however, the unsoundness of this purely psychological treatment was revealed. Hansen understood this very well and in his work sought to discern the operation of real factors behind the psychological stimuli. In his opinion, the level of marginal efficiency of investment or the expected rate of returns on invested capital is directly dependent on the scope of new application of capital, which in turn depends on 1) the rate of technical progress and 2) the increase in population. (12)

As long as investment stays at the level determined by these long-term needs, the marginal efficiency index may remain high. Yet actually, according to the Keynesians, the "waves of optimism," characteristic of expansion periods, raise investment far above the needs set by the increase in population and technological advances. As a result a portion of investment proves excessive and the rate of profit rapidly declines. (13)

It can be easily seen that consideration of the category of marginal efficiency of investment does not, even in this modified interpretation, solve the problem of the business cycle. This concept by no means explains why, under the conditions of capitalism, the period of expansion directly connected with the introduction of new equipment inevitably ends in a deep economic crisis. It is common knowledge that the same and even broader innovations in a socialist economy do not entail any such consequences.

The actual limits of economically justified (profitable) investment under the condition of capitalism are by no means the growth of population and the pace of technical progress. These limits are the capitalist relations of production. "The ultimate cause of all actual crises," Marx wrote, "always remains the poverty and limited consumption of the masses, counteracting the tendency of capitalist production to develop the productive forces as though the absolute purchasing power of society were the only limit of their development." (14)

Now let us see what analysis of the second "determinant" has produced. How does the rate of interest affect the volume of investment and, consequently, to what extent can a policy aimed at lowering the interest rate create favorable opportunities for investment?

As is well known, Keynes attached great importance to the regulation of interest rates. He claimed that a low rate of interest has a stimulating effect on the scope of investment and consequently can seriously contribute to a higher level of economic activity and fuller employment. (15)

Keynes obviously overestimated the role of the interest rate, which has been shown by subsequent statistical research. Taking these data into account, Hansen, in fact, relinquishes his teacher's starting point. He has to admit that with respect to machinery and productive equipment the interest rate, at least within the range (from three to eight %) at which loans are available in industrially developed countries, makes little or no difference. "Decisions to invest in new machinery are made, for the most part, irrespective of the interest rate," Hansen himself admits. (16)

This is understandable. The acquisition of new machinery and equipment offers the chance of creating enterprises with a technical level far above the average. Consequently, this capital will produce definite excessive, surplus value. In these conditions interest rate fluctuations do not seem to be able to affect the level of investment to any appreciable extent.

It is a somewhat different matter for investment in the construction of industrial enterprises and trade establishments. In this sphere technical pr gress has a considerably lesser effect. The possi bilities of obtaining excessive surplus value throug the employment of the newest designs for building and structures are much smaller than through the employment of the latest equipment. These possibilities are non-existent if capital is invested in housing construction. This explains why investme in residential buildings as well as in structures housing industrial and trade establishments show certain tendency to react to a change in the rate o interest at high and low rates alike.

The general conclusion at which Hansen arrives is not very comforting. "It means that it is not possible to induce any very large investment (except in construction) by pushing interest rates do to levels even lower than those already prevailing Monetary policy cannot, therefore, be regarded as of leading importance as a means to increase tota investment." (17)

Yet even this conclusion is undoubtedly an overstatement. The point is that Hansen takes no account at all of self-financing. Yet in recent years the large corporations resort to their own funds for investment more and more frequently. The va reserves of undistributed profits and depreciation charges enable them to do without the loan-marke for a certain time. A greater share of corporate capital in financing new investment and a declinin proportion of capital obtained through the issue of shares and loans have been graphically reflected in the American economy as well. Thus, in 1957 almost half (47.2%) of the current needs of the American corporations for capital investment wa met through self-financing. (18)

Thus, under present-day conditions the role of the interest rate even in the sphere of constructi is considerably smaller than is assumed by Hans

Besides, it should be borne in mind that in the phases of crisis and depression, when there is a considerable excess of commodity capital and pr ductive equipment, no decrease in the interest ra in itself can induce manufactures to make new, co siderable capital investments.

Thus, analysis of the "determinants" of investment offers no clue to the solution of the central problem of capitalist reproduction. Consideratio of the marginal efficiency of investment and analysis of the rate of interest have not, nor could th have, revealed the nature of cyclical fluctuations Bourgeois science operating with abstract categories and avoiding study of the inner contradictions of the capitalist mode of production, has no been able to transcend the consideration of purel superficial processes and has failed to reveal the essence of the phenomena under investigation.

ow let us turn to what may in a sense be called
Keynesian school's contribution proper to the
rgeois theory of the business cycle — the "con-
ption function" and the theory of the "super-
tiplier."

is well known that the expenditures of each
up in society is directly dependent on the income
eceives. This stable connection between the two
nomic categories is regarded by the Keynesian
ool as a functional dependence: "The consump-
function is...a schedule showing how much will
pent on consumers' goods at various sustained
ls of income." (19)

s is shown by an analysis of statistical data, the
-income families have almost no savings. Their
re income goes into consumer expenditures and
s. Even according to the data of the bourgeois
nomists, one-fourth of all American families
no savings at all and half of all families had
than 500 dollars at the beginning of 1957. (20)

is common knowledge that the more the income
eeds the minimum level above which savings be-
e possible, the smaller is the portion of it spent
onsumption and consequently the larger the part
ch becomes savings. Keynes tried to interpret
phenomenon, observable in the economy of any
talist country, as a result of some kind of uni-
sal psychological law "in accordance with which,
n the real income of the community increases
ecreases, its consumption will increase or de-
se, but not as fast...." (21)

his oft-quoted law is regarded as of primary
ortance by the Keynesians. They believe that
of the principal causes of insufficient effective
and is the lagging of consumption behind income
ls.

he lag of consumer demand behind the incomes
e propertied classes of bourgeois society does
ct the development of capitalist reproduction.
the unscientific attempts to represent this phe-
enon as a manifestation of some psychological
must be decisively rejected. Actually, this is a
omenon determined by the social nature of
rgeois society.

fact, is not the absence of savings in the low-
me brackets a direct consequence of the indis-
ble fact that under capitalism the wages of the
ority of the working population are below the
sistence level? Furthermore, there is more
adequate basis for assuming that the savings of
middle strata of bourgeois society result not
the "psychological propensities," but stem
ctly from the extreme precariousness of their
tion, their uncertainty as to the future and their
to somehow ensure themselves and their fami-
against possible ruin or unemployment. As for
the high level of "savings" of the capitalist class, this is not at all an expression of a psychological law. The domination of monopolies created the conditions for a significant increase in the rate of surplus value. A certain portion of these "savings" under the conditions of the general crisis of capitalism is nothing else but idle capital in the form of money. An additional factor here is competition, inducing the entrepreneurs to maintain a portion of their capital in liquid form.

Thus, a closer inspection shows that Keynes' psychological law is scientifically groundless. There is no super-historic "consumption function" nor could there be. Within the framework of any social system consumption is directly dependent on the distribution of the means of production and the resulting distribution of the national income. Under the condition of capitalism profit-seeking reduces the income of the working masses. From this comes the lag of consumption behind the growth of production. Thus, the very nature of the capitalist relations of production, and not any "propensity to consume," engenders the periodic crises of overproduction.

Keynes attempted to find the dependence between the growth of investment, the consumption function (manifested in a certain level of the "marginal propensity to consume") and the growth of income.

He held that an increase in investment induces a multiple growth of income and tried to find a mathematical expression for this dependence. The latter, in his opinion, can be expressed by the equation $\Delta Y = k \Delta I$, where k is the multiplier of investment, the value of which is directly determined by the index of the marginal propensity to consume. (21)

The concept of the "investment multiplier" suggested by Keynes was fully adopted by Hansen. "The investment multiplier has to do with the magnified effect of an increment of investment upon the level of income," he wrote. "How large the secondary effect will be depends upon the slope of the consumption function — in other words, upon the marginal propensity to consume. The slope tells us how powerful the multiplier is." (23)

The starting point for evolving the concept of the "multiplier" is the idea of certain "secondary effects" of the process of expanded reproduction. According to this theory, the investment of additional capital brings forth new demand the satisfaction of which calls for a certain expansion of production. This, in turn, causes higher demand and may call for a further expansion of production. Thus, the investment of additional capital is allegedly capable of giving rise to several waves in the growth of income and employment. If the growth of employment and income attributable to the investment of additional capital may be defined as the primary effect, the expansion of production and the new growth of income attributable to the satisfaction of additional demand may be defined as the "secondary effect" of the process of expanded reproduction.

It is necessary to note here that even the most general analysis of the conditions and contradictions of capitalist reproduction shows that the value of the "secondary effect" depends on a number of factors, of which some weaken or even paralyze the action produced.

To begin with, it should be borne in mind that within certain limits the growth of demand attributable to the spending of income can be satisfied without expanding production by drawing from commodity stocks available. In the modern stage of capitalism this factor plays an increasing role.

Furthermore, production can within certain limits be increased without additional employment and with a very small rise in wages. If the growth of demand is so considerable that it will induce the capitalists to expand production, despite a certain amount of unsold commodity stocks, there is no doubt that at first they will seek to increase production without making additional capital outlays or taking on new employees. Chronic below capacity operation of industrial plant and mass unemployment in the period of the general crisis of capitalism as well as the potential for increasing the intensity of labor offer wide opportunities for expanding production without additional man power and consequently with a very small rise in wages. The "secondary" expansion of production in this case will entail no substantial increase in demand, though it may have a perceptible effect on the branches concerned with the production of raw materials.

Under the conditions of modern capitalism a serious factor opposing the "secondary" expansion of production is the growing domination of the monopolies. Frequently the monopolies may derive more profit from selling a limited amount of commodities at artifically inflated prices than from the expansion of production.

The influx of foreign commodities into the internal market of a capitalist country may also prove a major factor in opposing the "secondary" expansion of production. If the economy of a country is not protected by tariffs the growth of demand can be more or less satisfied through the sale of imported goods. In this case the "secondary" expansion of production in the branches of the national economy of the country in question will be even smaller.

Thus, it can be seen that under the conditions of capitalism there are a number of factors which can sharply restrict or even nullify the development o the "secondary effect." At the same time it shoul be noted that the growth of demand may be directe toward purchasing new commodities still produce in limited quantities. This raises the prices of these commodities and consequently raises the ra of profit on the corresponding capital. The latter results in a sharp influx of capital in virtue of the anarchy of capitalist production. Production shoo far beyond real demand. Thus, the "secondary effect" under the conditions of capitalism actually contributes to the development of crises.

Therefore, the viewpoint of the Keynesian schoo which has reduced the entire analysis of the "secondary effect" to consideration of the role of the consumption function, cannot be regarded as scientifically substantiated. The Keynesian concept of the "multiplier" has resulted in a fallacious and clearly exaggerated notion of the actual limits of the "secondary effect" in the capitalist economy.

Later, in the works by the American economist Samuelson, J. M. Clark and Hansen, the concept o the "multiplier" was linked with an analysis of the "principle of derived demand" or the "accelerato principle." Whereas the "multiplier" of investme in Keynesian literature is understood as a coefficient reflecting the multiple effect of an incremen of investment on income, the "accelerator" is a numerical factor reflecting the multiple dependen between the growth of income and the volume of i vestment.

"The induced rise in income may in turn induce further rise in investment," Hansen wrote. "This latter effect is known as the principle of derived d mand or the acceleration principle." (24) In term of a more specific analysis the "acceleration principle" is understood as the dependence between changes in consumer demand and changes in the production of producers' goods.

It would be wrong to ignore derived demand. It does exist and deserves serious study. Yet the K nesian "accelerator" theory cannot be regarded a scientifically substantiated.

As is well known, the expansion of production i any branch, and not merely in the branches of Div sion II (as is assumed by the Keynesians), calls f such initial capital outlays as would exceed the value of the annual increment of production, provided this expansion cannot be achieved through fuller use of the available productive capacities. This is due to a high organic composition of capit as well as to the fact that the fixed capital outlay are made at the time an enterprise is founded but are amortized in part. The higher the organic co position of capital, the larger the increment of th initial capital outlays needed for each per cent of wth of production. This dependence should cer- ly be taken into account in analyzing expanded roduction.

et a number of factors operating in the opposite ection should also be mentioned. First, it should orne in mind that production can be expanded out additional equipment. Practice has shown the volume of production may be increased with- almost any additional capital outlays through eding up the operation of machinery and reducing time.

the conditions of modern capitalism the effect nder-capacity operation of the system of produc- should also be taken into account. At the end of 3 US industries were working at 70% of their ca- ity, and the figure was even lower for some nches. (25) With so vast an excess of production acities the growth of production will entail prac- lly no demand for additional equipment, unless growth is connected with the transition to a new nical level of production.

hat with the domination of monopolies interested aintaining high prices and the competition from eign firms placing equipment on the market, the ct of derived demand will be even more weak- l. The effect practically vanishes during de- ssions and crises, but it may exist during indus- l booms when the expansion of production is eved on the basis of introducing new and more cient equipment, i.e., as a result of the transi- to a new level of development of the productive es.

hus it can be asserted that the Keynesian inter- ation of the “multiplier” and the “acceleration ciple” gives a false idea of the processes at k if only by ignoring a number of major factors cting the magnitude of the secondary expansion roduction. But this is not the chief point. The ential methodological defect of this bourgeois ry, and indeed the entire Keynesian analysis, is complex social problems of the capitalist econ- are mechanically reduced to a number of one- d and often farfetched mathematical dependen- . The process of capitalist reproduction is yzed as though there are no sharp social con- ictions, no class struggle, in bourgeois society, only certain neutral values: income, consump- , savings, investment. Shunning all analysis of nner contradictions of the capitalist mode of luction, the Keynesian school tried to account for nomic processes by obviously farfetched “psy- ogical propensities.” This profoundly fallacious tion determined the scientific untenability of the geois theory of the “multiplier” and the “accel- ion principle.”

ow we can proceed to direct consideration of the modern Keynesian model of the “autonomous cycle.”

Keynes devoted one chapter of his General Theory of Employment, Interest and Money to a sketch of the industrial cycle. Yet his analysis stays within the framework of considering the general connection between “cyclical fluctuations” and such categories as “marginal efficiency of capital,” the interest rate, and the “propensity to consume.” According to Keynes, the immediate cause of a crisis is a decline in the “marginal efficiency of capital.” The growth of the rate of interest also contributes to the emergence of a crisis, though it plays a less significant role than the former factor. (26) Keynes accounted for the impossibility of maintaining a permanent boom in the last analysis by the high rate of the “marginal efficiency of capital” (which cannot be sustained for an unlimited length of time) and low “propensity to consume.” (27)

Confining himself to this general exposition of the problem, Keynes did not even attempt to show how, under the influence of the factors he mentions, the industrial cycle unfolds, and what the direct mechanism of the evolution of the phases of the cycle is.

Keynes' students, including Hansen, tried to fill in this obvious gap and to construct a model of the cycle. In this respect Hansen's work is of especial interest since it contains an attempt to build a comprehensive model of the “autonomous endogenous cycle,” drawing on the older as well as the latest arguments of the Keynesian theory.

Proceeding from an analysis of “investment determinants,” Hansen links up the beginning of an industrial boom with the investment of new capital. This initial capital investment directly connected with technological progress, is termed “autonomous” investment as distinguished from so-called “induced investment,” i.e., additional investment of capital induced by the growth of final demand. “Autonomous or independent investment (more or less independent of current sales) is opened up by inventions, new discoveries, new products, and new processes,” Hansen wrote. “Autonomous investment is typically the spark plug that starts an upward business movement.” (28)

Once started, an industrial boom expands and develops as a result of the interaction of the “multiplier” and “the acceleration principle.” “Autonomous” investment has a multiple effect on income (“the multiplier”) and the growth of income gives rise to the need for new investment, the magnitude of which is determined by the “acceleration coefficient.” Thus, both processes are alleged to be in a state of bilateral dependence; they influence and strengthen each other.

This connection of the "multiplier" and the "acceleration principle" is referred to by Hansen as the systen of "interacting levers," or the "super-multiplier" system. It is precisely the system of these levers, in his opinion, that converts the effect of "autonomous" investment into a cumulative process of boom. With a high "marginal propensity to consume" and high derived demand, the upward process can continue "until the ceiling of full utilization of labor or capital facilities is reached. At this point output will flatten out, and so (via the accelerator) induced investment will decline." (29)

If the upward process does not attain the maximum employment of the productive forces, this is due, in Hansen's opinion, to an extreme "propensity to save" as well as a restricted sphere of application of "autonomous" investment which at a certain stage leads to lowering its "marginal efficiency" (i.e., profitability). "Thus there are two reasons (apart from the induced decline when the full employment ceiling is reached) why the cumulative process of expansion comes to an end: (1) the marginal propensity to save would call a halt to the expansion even if the autonomous investment were maintained, and (2) the autonomous volume of investment runs out by reason of the declining slope of the marginal efficiency of investment schedule." (30)

As the boom proceeds the gap between consumption and income increases. Obviously, the longer this situation prevails, the more precarious it becomes. In Hansen's opinion the consumption-income gap in the first phase of expansion is filled entirely or almost entirely by investment. However the market of capital investment opened up by technical progress is not limitless. It is satiated after several years of intensive investment. While there is a sufficient reserve of unrealized innovations, the backlog of autonomous investment plus the investment "induced by rapid expansion may be adequate to fill the consumption-income gap. Once the backlog is exhausted, however, and once the rate of increase in output begins to taper off, then both the autonomous and induced investment will tend to die down. Thus the boom 'dies a natural dealth'." (31)

In a period of depression, on the other hand, a condition ensues, in Hansen's opinion, when "income is driven so low that consumption exceeds income." (32) Gradually stocks are being used up and "capital goods" are being depreciated. This creates certain stimuli for the realization of replacement investment while the simultaneous continuation of technical progress opens up possibilities for new "autonomous" investment. Thus, the transition to a new stage of expansion is being ultimately prepared.

Hansen brings his exposition of the modern bourgeois concept of the business cycle to an end with the following central conclusion: "There are, ac cordingly, self-limiting factors inherent in the na ture of the economy which explain the oscillatory process of expansion and decline. The system do not progressively feed on itself; it does not move indefinitely in a cumulative fashion. On the contrary, there are self-limiting factors within the structure of the system itself which limit both ex pansion and contraction." (33)

Such in its general features is the modern Key nesian model of the "autonomous cycle."

The entire concept cannot be considered scientifically substantiated, despite an obvious attemp to incorporate in it analysis of the most varied e ments. We have mentioned the fallacious attemp by-pass analysis of social factors and to give a p chological interpretation of economic categories, the untenability of the Keynesian theory of the "m tiplier" and the "principle of acceleration." To t we must now add that both propositions, with the help of which the advocates of the above-stated model endeavor to explain the development of the business cycle and the alternation of its phases, a absolutely unsatisfactory.

To begin with, the notion that through the actio of the famous psychological law income grows mo quickly than consumption during a period of expa sion and consumption grows more quickly than in come in periods of depression is clearly artifici it is not supported by statistical data.

We shall taken an example close at hand, the figures given by Hansen in Section 4 of his book. In the period from 1946 and up to 1950 the growt of gross national product and private consumptio in the USA is characterized by the following data (in billions of dollars): (34)

Year	Gross National Product	Private Consumption	Share of privat consumption in the gross nation product (%)
1946	211.1	146.9	69.6
1947	233.3	165.6	70.9
1948	259.1	177.4	68.5
1949	255.6	178.8	70.0
1950	265.3	183.5	68.8

Thus in the period under review the ratio of c sumption to income was practically unchanged. variation of 1 to 1.5%, cannot, of course, play a appreciable role.

It can be seen that the Keynesian theory accor which the consumption-income lag is one of the ier causes of a crisis and the more rapid growth consumption over income secures the overcoming a depression has nothing to do with the actual de-lopment of these phenomena.

Equally wrong is the concept that at the higher ages of an expansion investment attributable to chnical progress ("autonomous" investment) gradu-y ends as a result of which derived ("induced" in-stment) declines as well.

Statistics show that investment mounts until the isis sets in. The share of gross investment in the gross national product amounted to 21.5% at the ghest point of the 1920 expansion, 16% at the high- point of the 1929 expansion and 17.4% at the ghest point of the 1948 expansion. (35)

The boom does not "die a natural dealth," it comes against a wall, and then production drops into the yss of crisis. It is perfectly evident that it is not termination of investment which causes general erproduction, but rather it is the overcrowding of channels of circulation with excessive goods ich arrests the continued influx of investment.

Seeking to justify the capitalist mode of produc-n, the Keynesian school describes the cycle as an evitable product of a dynamic economy. "The mod-n analysis reveals that, so long as the economy mains dynamic, so long as the requirements of owth and progress call for large investment out-s, powerful forces will be at work to produce cy-cal fluctuations. One cannot, therefore, regard cycle as a pathological condition. It is inherent the nature of the modern dynamic economy." (36)

The unsoundness of this proposition, a logical erence from the Keynesian analysis of the cycle, s been clearly demonstrated by the experience of building of socialism in the USSR and the Peo-'s Democracies. For more than 40 years the viet Union's economy has been developing without ses. It should be remembered that within the me period the economy of the United States of erica experienced six general crises of overpro-ction, including the most severe crisis of 1929-33.

The propositions considered above show that the siness-cycle theory propounded by modern bour-ois economists is as sterile as the theory put th by their ill-starred predecessors. It has failed reveal the laws of the development of capitalist roduction or the actual causes of the economic sis.

Only on the basis of the great Marxist doctrine, ich discloses the social nature of the capitalist stem and the inherent laws of its development, uld there be given a scientific solution of the prob-ns of capitalist reproduction. The Marxist classics have convincingly shown that the periodic crises of overproduction are caused by the basic contradiction of capitalism — the contradiction between the social character of production and private appropriation.

"Since the aim of capitalism is not the satisfaction of needs but the production of profits," Marx wrote, "there is constantly bound to arise a discrepancy between the limited scope of consumption on the capitalist basis and production, which constantly strives to transcend these immanent bounds." (37)

Only the Marxist analysis exposed the actual causes of underconsumption and unemployment of the working masses and the inevitability of economic crises of overproduction.

The modern bourgeois business-cycle theory has been used for drawing up every possible kind of anti-crisis program. Hansen devotes part IV of his book to stating these processes and recipes. Here we find rather considerable factual material on the anti-crisis policy of the USA in the 1920's and in the postwar period. The author sets down in detail the presidential reports on the economic state of the country, examines the methods of compiling economic forecasts put forth in the postwar years and the role of the "built-in automatic stabilizers." Hansen tries to convince the reader that the modern bourgeois business-cycle theory provides a basis for working out a satisfactory program for regulating economic activity which will certainly make it possible to sharply reduce the impact of cyclical fluctuations if it does not provide the possibility for overcoming them completely.

Life has shown that these hopes are illusory. The Keynesian recipes for increasing the level of consumption have come up against an insoluble dilemma. A significant increase in purchasing power could be secured only by those methods which involved the redistribution of the national income in favor of the low-income groups in the population. But under the conditions of the domination of the exploiting classes all projects of this kind inevitably proved to be stillborn.

The attempts to solve the problem by transferring a portion of the working people's expenditures from the best times to the hardest, that is, without encroaching upon the interests of the ruling classes, (recipes for varying the social security contributions of workers and employees or increasing government grants to the population during depression to be defrayed by the higher taxes payed during the expansion period) were obviously reminiscent of the story of Trishka's coat. These measures could not and indeed did not have any significant effect. It should be remembered that the increased unemployment grants made by the American Government in the shape of "extraordinary measures" to fight the crisis of 1957-1958 made it possible to compensate less than one-third of the sum lost by the workers in the USA as a result of reduced wages in 1958. (38)

Nor has the program to stimulate private investment by lowering bank interest, and the other measures aimed at easier financing for industry, brought the expected results.

The predominant policy in the postwar period has aimed at compensating for insufficient consumption and curtailment of private investment through a sharp increase of military and some other government expenditures (subsidizing exports, for example, etc.). These measures had a certain effect on the development of the cycle, but they could not, of course, spare capitalist society from periodic crises of overproduction, chronic unemployment and the poverty of the working masses. The hopes for "prosperity through armament" proved illusory. The experience of postwar America is graphic proof of this.

Footnotes

(1) E. Khansen, *Ekonomicheskie Tsikly i Natsional'nyi Dokhod*, Moscow, 1959.

(2) *Ibid.*, p. 47 [English edition, p. IX].

(3) *Ibid.*, p. 56 [English edition, p. 4].

(4) *Ibid.*, p. 53 [English edition, p. 5].

(5) *Ibid.*, p. 93 [English edition, p. 39].

(6) *Ibid.*, p. 113 [English edition, p. 57].

(7) *Ibid.*, pp. 70-71 [English edition, p. 18]. According to Hansen, real investment has to do with total fixed capital, including producers' durable equipment, producers' plant and residential construction." (*Ibid.*, pp. 139-140). [English edition, p. 79].

(8) *Ibid.*, pp. 188, 204-206 [English edition, p. 124].

(9) *Ibid.*, p. 189 [English edition, pp. 125-126].

(10) Dzh. M. Keins. *Obshchaia Teoriia Zaniatosti, Protsenta i Deneg*, Moscow, p. 133. [J. M. Keynes, *The General Theory of Employment, Interest and Money*, p. 141].

(11) "In estimating the prospects of investment, we must have regard, therefore, to the nerves and hysteria and even the digestions and reactions to the weather of those upon whose spontaneous activity it largely depends." *Ibid.*, p. 154 [English edition, p. 169].

(12) A. Hansen, *op. cit.*, p. 203 [English edition, p. 137].

(13) Hence the following relationship: "The larger the volume of investment, I, the lower the marginal efficiency rate, r. Thus the marginal efficiency of investment is a function of the volume of investment; r - f (I)." *Ibid.*, p. 192 [English edition, p. 128].

(14) K. Marx, *Capital*, Vol. III, p. 498 [Russian edition].

(15) "Thus it is to our best advantage to reduce the rate of interest to that point relatively to the schedule of the marginal efficiency of capital at which there is full employment." (J. M. Keynes, *op. cit.*, p. 361). [English edition, p. 375].

(16) A. Hansen, *op. cit.*, p. 199 [English editio p. 134].

(17) *Ibid.*, p. 201 [English edition, p. 136].

(18) *Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia*, 1959, No. 3, str. 102.

(19) A. Hansen, *op. cit.*, p. 214 [English editio p. 147].

(20) *Consumption — Key to Full Prosperity*, Washington, 1957, p. 13.

(21) J. M. Keynes, op. cit., p. 109 [English edition, p. 114]. Hansen enunciates this law in the following manner: "In general we conclude that a income rises, consumption also increases, but no as much as income." [A. Hansen, *op. cit.*, p. 218 [English edition, p. 150].

(22) For a more detailed analysis see L. Al'te "Mul'tiplikator i Printsipakseleratsii v Burzhvaznoi Politekonomii," *Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia*, 1960, No. 1.

(23) A. Hansen, *op. cit.*, pp. 241-243 [English edition, pp. 171-173].

(24) *Ibid.*, p. 241 [English edition, p. 171].

(25) *Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia*, 1959, No. 8, supplement, p. 8.

(26) "But I suggest that a more typical, and often the predominant, explanation of the crisis is not a rise in the rate of interest, but a sudden decline in the marginal efficiency of capital" (J. M. Keynes, *op. cit.*, p. 305).

(27) *Ibid.*, p. 315.

(28) A. Hansen, *op. cit.*, p. 262 [English editio p. 190].

(29) *Ibid.*, p. 244 [English edition, p. 175].

(30) *Ibid.*, p. 249 [English edition, p. 179].

(31) *Ibid.*, p. 606 [English edition, p. 496].

(32) *Ibid.*, p. 267 [English edition, p. 194].

(33) *Ibid.*, p. 607 [English edition, p. 497].

(34) *Ibid.*, p. 615 [English edition, p. 505].

(35) *Ibid.*, p. 615 [English edition, p. 505].

(36) *Ibid.*, p. 607 [English edition, p. 497].

(37) Marx, *op. cit.*, p. 267 [Russian edition].

(38) See "Conjuncture Survey," *Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia*, 1959, No. 8, Supplement, p. 25.

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Mirovaia Ekonomika i Mezhdunarodnye Otnosheniia,
1960, No. 7

KATZ:

e Labor Aristocracy in the United States of America

he vast concentration of production in the im-
ialist era, particularly in the period of the gen-
l crisis of capitalism, and the powerful develop-
nt of machine technology on this basis have been
rumental in bringing about a considerably great-
lepreciation of skilled labor. At the same time,
increasingly extensive use of machines trans-
ns workers formerly occupied with simple
ual labor into low-skilled attendants of the ma-
ne. As the result of these processes, social and
nomic distinctions between different strata of the
letariat have begun to diminish, while the propor-
of low skilled machine operators has grown
kedly. Some notion of these changes in industry
ne USA is given by the following table:*

Table 1

	1900	1910	1920	1930	1940	1950	1950	1957
Skilled workers and foremen	29.3	30.4	33.3	32.3	30.1	34.3	32.3	34.0
Semi-skilled workers	35.8	38.2	38.8	39.9	46.2	49.6	51.7	50.6
Unskilled laborers	34.9	31.4	28.9	27.8	22.7	16.1	15.9	15.3

e should first of all dwell on the structural
nges which have taken place in the main mass of
proletariat, which is made up of slightly trained
kers and unskilled laborers. As Table 1 shows,
cial statistics indicate the growth of the number
emi-skilled workers at the expense of unskilled
rers. The decline in the proportion of unskilled
rers from 34.9% in 1900 to 16.1% in 1950 was
nded by an increase in the percentage of semi-skilled workers from 35.8% to 49.6%. At first glance this might seem to prove some improvement in the position of the main mass of the workers. Such a hasty conclusion would, however, be entirely wrong. The point is that further development of mechanization and the division of production operations in capitalist conditions has lowered the level of training of the so-called semi-skilled workers to the extent of making the difference between them and the unskilled workers barely noticeable. Being occupied with simple manual labor or with simple machine operation served in most cases during the census as a criterion for classifying workers among the semi-skilled or unskilled. In the former case a worker was classified as unskilled, and in the second — as semi-skilled, although in both cases the difference in vocational training, i.e., in the quality of labor and in wages, is insignificant or does not exist at all. As shown below, 43% of the Ford Plant's workers required one day of training for the performance of their jobs and 36% required eight days of training. And yet almost all these workers were operating machines and were therefore classed in the census as

* Data for 1900-1950 were calculated on the basis of the returns of population censuses (D. Kaplan and M. Casey, Occupational Trends in the United States, 1900 to 1950), Bureau of the Census, Washington, 1958, pp. 6-7; data for 1950-1957 were derived from the results of selective polls taken among the population (average figures for January, April, July and October; see "Current Population Reports," Series P 1-50, No. 89, p. 6). The results of the selective polls are not directly comparable with the data of the general population censuses. The table does not cover workers employed in agriculture and in the services in order to give a more accurate picture of the changes brought about by industrial development.

semi-skilled. Even some bourgeois economists of the United States recognize that it is very difficult to establish any distinction between the overwhelming majority of the workers classified by official statistics among the semi-skilled and the remaining mass of ordinary, untrained workers. "They usually require limited ability of the machine-tending or fetch-and-carry kind." write Anderson and Davidson. "These operations repeat themselves again and again; the necessary experience is acquired in the course of a short period of training and little is added by subsequent practice. It is at times not easy to distinguish many forms of such work from unskilled labor, and in actuality they are at best only slightly above this level." (1)

It is perfectly evident that an increase in the proportion of the so-called semi-skilled workers at the expense of the untrained workers does not reflect a real improvement in the position of definite strata of workers, but merely a change in their classification due to their transition from simple, low-paid manual labor to equally simple, low-paid machine work. This fact is fully confirmed by the 1950 census returns considered below and by selective information relating to the late forties and fifties on the distribution of various groups of workers according to their annual earnings.

With respect to the skilled workers, the census returns on the occupational composition of the population obscure to a significant extent the changes which have taken place. There are a number of reasons for this. According to the information give in Table 1, the thirties witnessed the emergence o a tendency towards a drop in the proportion of skiled workers. A certain increase in the share o skilled labor was observed in the forties and fifties but what this fluctuation reflects is the change in t relationship between the large branches of the national economy with respect to relative number of skilled workers and its dynamics, rather than a re increase in the proportion of skilled workers in industry. This may be seen in Table 2.

Table 2*

	Number of skilled workers employed (in thousands)		Increase (%)
	1940	1950	
Agriculture	12.0	20.0	66.7
Mining	119.2	161.0	35.0
Manufacturing	2,052.6	2,845.3	38.6
Transportation, communications, electric power production, gas works, etc.	540.0	719.1**	33.1
Construction	1,211.0	1,951.4	61.1
Trade	372.6	650.6	74.6
Repair services	460.2	662.1	43.9
Finances, services, etc.	216.3	318.8***	47.4
State enterprises and institutions	46.5****	205.5	341.9
Total	5,030.4	7,533.8	49.8

* Compiled and calculated on the basis of the Sixteenth Census, Population Vol. III, Part 1, Table 82; Census of Population, 1950, Vol. II, Part 1, Table 134.

** Excluding mechanics for telephone, telegraph and electric networks, classed in 1940 census returns among the semi-skilled workers.

*** Excluding film operators classed in the 1940 census returns among the semi-skilled workers.

**** Excluding skilled workers employed in state munitions factories left out of the 1950 census returns.

ring the ten year period, 1940-1950, the
lest increase in the number of skilled workers
place in the most mechanized branches of pro-
on: in the manufacturing industries (38.6%); in
ng (35%); in transport and communications, in
roduction of electric power and gas (33.1%).
greatest increase in the number of skilled
ers took place in the least mechanized branches
oduction: in construction (61.6%); trade (74.6%);
ance and the services (47.4%); in state enter-
es and institutions, apart from the military
9%). It should also be remembered that inas-
as the census returns covered the entire
ully employed population, the category of
ned workers" includes "independent workers"
ged in manual labor and workers employed in
icraft shops which still exist in some branches
repairs, etc.) or which have been called into
; by the development of new branches of produc-
(repair of automobiles, radio sets, electric ap-
ces, etc.). The construction industry is a spe-
case in which old methods of production and the
killed trades have been preserved to a signifi-
degree.

e proportion of skilled workers has grown
tly in the manufacturing industries (from 25.3
.3%), it has remained practically unchanged in
ruction for the above-mentioned reason (67%
7.9% respectively) and has increased noticeably
e mining industries (from 14.5% to 20%). But,
e census returns indicate, the number of skilled
ers tended to decline in some of the key branches
e manufacturing industries in the 1940-1950 pe-
as well (see Table 3).

e figures presented indicate that the tendency
rds a relative decline in the proportion of
ed workers is clearly evident in most indus-
with a high proportion of skilled workers
% of the total in 1950), even according to the
us figures for the occupational composition of
opulation. The decline in the skilled labor force
to the simplification of work operations for
long training was formerly required prevails
the increase in the number of trained workers
ged in the adjustment and repair of equipment.
on the contrary, in branches of production with
proportion of skilled workers, because of the
ased mechanization of labor the increase in the
er of trained workers occupied with adjusting
dka] and repairing of equipment prevailed.

ulk of the skilled workers is concentrated in
ches of production with a high proportion of
ed labor. Therefore, the decline in the propor-
f skilled workers in these very industries is
cisive social significance.

hould at the same time be remembered that the tendency toward a decline in the proportion of skilled workers is sharply underestimated in the census returns on the occupational composition of the population. The point is that many skilled

Table 3*

Industries where the proportion of skilled workers fell	Number of skilled workers		
	in thousands	%	
	1950	1940	1950
Aircraft	89.4	55.6	53.0
General machine-building	403.0	51.7	44.4
Railway equipment	18.8	43.3	40.8
Metal ware	277.4	34.6	33.1
Non-ferrous metals	77.4	34.6	31.6
Oil and gas	50.1	32.5	29.9
Automobile	195.0	31.3	28.5
Electric-machine building	146.1	27.8	26.8
Food	212.7	22.4	21.5
Woodworking	158.9	23.8	18.5
Garment	61.4	9.0	6.8
Lumbering	9.1	6.0	5.7
Printing and publishing	291.3	69.2	71.3
Shipbuilding	81.9	54.9	66.1
Ferrous metal	287.3	31.9	37.1
Oil and coal refining	61.1	34.1	36.2
Chemical	101.6	19.9	26.4
Others	139.7	24.8	26.2
Ore mining	40.2	17.8	25.4
Coal mining	160.9	14.5	20.0
Construction materials	69.1	16.9	19.1
Paper	67.8	16.8	19.0
Rubber	32.3	14.9	18.6
Textile	129.8	9.0	12.1
Tobacco	8.1	6.8	10.4
Leather	8.9	7.2	9.5
Shoes	15.8	4.8	6.8
Construction	1,951.4	67.0	67.9
Manufacturing	2,845.3	25.3	26.3
Mining	160.9	14.5	20.0

* Compiled and calculated on the basis of the Sixteenth Census, Population, Vol. III, Part 1, Table 81; Census of Population, 1950, Vol. II, Part 1, Table 134.

workers after the replacement of their skilled work by simple operations on new machines, have been placed, by the nature of the work performed and the wages received, on a level with the poorly trained workers; yet during the census of the occupational composition of the population they gave their old trades. "Then 'machinist' is a particularly unsatisfactory classification, for many machine tenders who are actually semi-skilled workers list themselves as machinists. And it is not altogether improbable that helpers and apprentices fudged a bit to the census enumerator so that some at least who appear as carpenters, masons, plumbers and the like are not full-fledged craftsmen." (2)

The extent to which the above-mentioned census returns on the occupational composition of the population depart from the real facts is most strikingly evident in the automobile industry. At the meeting of the temporary National Economic Committee of the Senate, in April, 1940, it was pointed out that in the automobile industry "Most operations had been simplified and specialized until they required no experienced skill for satisfactory production. It is alleged that in the Ford plant 43% of the workers require one day to learn their jobs, 36% up to eight days, 6% up to two weeks, 14% from a month to a year, and only 1% more than a year." (3)

The following job categories were established during a survey of an automobile assembly plant in 1949: "(1) single operation jobs requiring a day to a week of learning time; (2) three to five operation jobs requiring a day to a week of learning time; (3) the jobs of utilitymen, whose skills are the sum of a number of low-skilled jobs, each of which requires a day to a week of learning time; and (4) the jobs of repairmen and a few others" requiring up to one year of training. The latter group included 7.8% of all the workers. (4) And yet, according to the 1940 census returns, skilled workers made up 31.3% of the total number of workers in the automobile industry, and according to the 1950 census — 28.5%. A considerable number of skilled workers indicated in the census returns remained skilled in name only.

As automation of production spreads, two opposing processes may be observed: along with the increase in the proportion of skilled workers occupied with the adjustment and current repair of equipment, the stratum of skilled workers occupied directly in production is still shrinking sharply. In Ford's automated motor factories, for example, the number of workers employed in basic production dropped from 8,253 in 1950 to 6,399 in 1954, whereas the number of auxiliary skilled workers occupied with the adjustment and current repair of equipment has grown by 976. Furthermore, it takes three days to retrain a "machine operator" into an "automation equipment operator" at Ford's motor factory in Cleveland. Management representatives of this factory declared that "automation reduces training require ments because less skill, less dexterity, less knov edge and care are required of the workers: "'We ran the Cleveland plant with people right off the street.'" (5) Officials of the American Bureau of Labor Statistics who investigated a large factory f producing radio and TV sets found that as a resul of the introduction of an automated line, "The new technology created some new machine-tending job for which no greater skill or training seemed required; only two weeks training was given." (6)

As the result of a scrupulous investigation of te factories with automatic equipment, J. Bright, an economist at Harvard University, arrived at the f lowing conclusion: "Automated machinery requir less operator skill, or at least not any more skill after certain levels of mechanization are passed.. the average worker can more quickly and easily master new and different jobs where highly automatic machinery provides the skill, effort and co trol required. Furthermore, some 'key' skilled jobs currently requiring long experience and trai ing are reduced to easily learned machine-tendin jobs....it would appear that the trends toward high levels of automation will definitely lower operato skill requirements in the future on many machine tools, for assembly activities that become mechanized, and in similar equipment-manning duties o operations where manual dexterity and machine manipulation skill and knowledge now are vital." (

On the whole, the lowering of the skill levels of considerable section of the labor force as the result of automation of the production process will compensated for, or even surpassed, by an increa in the auxiliary skilled labor force necessary for the adjustment and current repair of equipment. (This is even more true if it is remembered that, along with the spread of automation of production the technically more advanced industries, the use mass production methods will be pushed forward the more backward branches of production with a resulting decline of the skilled labor force in the branches.

It should be emphasized that during the decade under review there has been a further rise in the general education and cultural and technical leve of the working population with the expansion of th network of elementary, junior high and high scho Consequently, what we have is a considerable decline in the stratum of skilled workers requiring longer period of vocational training, along with a improvement in the general, cultural and technic level of the working class as a whole.

In view of the above-mentioned inadequacies of

ensus returns on the occupational composition
e population, an important correction relating to
ges in the proportion and position of the skilled
force is supplied by the information on wage
and actual earnings of the trained, poorly
ed and unskilled workers. There should be es-
shed first of all the extent to which the statisti-
lassification of the workers according to occu-
ns (into skilled, semi-skilled and unskilled)
esponds to the real differentiations in the pay-
for their labor. An answer to this question is
in the first place by the returns of the 1950
ıs which show the distribution of the workers
oyed for 50 to 52 weeks according to the 1949
of annual income. (9) Even given full employ-
during the year, 76.7% of the skilled workers
n annual income below the budget calculated by
eller Commissions ($4,162 for a worker's fami-
four). As for the fully employed semi-skilled
nskilled workers (exculding farm workers),
and 97.1% of the respective groups earned less
the Heller Commission budget. (10)

e 1950 census returns reveal considerable un-
oyment not only among the semi-skilled and un-
ed workers, but also among the skilled workers,
ay be judged from the information presented
on the degree of employment among different
a of the working class in 1949 (see Table 4).

Table 4*

Groups of workers	General number of workers (in thousands)		Workers employed 50-52 weeks as a % of the total number employed on some job during the year	
	men	women	men	women
Skilled	7,833.6	245.2	65.8	63.6
including foremen	777.0	69.4	85.8	75.1
Semi-skilled	8,491.3	3,192.1	60.5	47.1
Unskilled (excluding agricultural workers)	3,586.7	132.7	49.7	48.3
Agricultural workers	1,447.2	153.7	51.0	22.5

* Compiled on the basis of the US Census of Population, 1950, Vol. II, Part 1, Table 129.

e degree of employment of skilled male work-
uring 1949 was practically the same as the de-
of employment among the semi-skilled male
ers: in the former group only 65.8% of all
who were employed on some sort of job during the year (which means, excluding the totally unemployed) worked 50 to 52 weeks, as against 60.5% in the second group. If we exclude from the group of skilled male workers the foremen, for whom the proportion was 85.8%, we are left with no essential difference between the degrees of employment among the skilled and semi-skilled workers.

If unemployment is taken into consideration, the low level of annual earnings of the overwhelming mass of the skilled workers prevails throughout the 1950's. The Heller Commission's budget for a worker's family was valued at $4,234 in 1948, at $4,162 in 1949, $5,583 in 1953, $5,501 in 1954 and $6,018 in 1957. (11) Selective surveys conducted by the Bureau of the Census (12) indicate that 83.6% of the fully or partially employed skilled workers earned less than the Heller budget in 1958; the same was true of 84.3% in 1949, 80.5% in 1953, 77.2% in 1954 and 73.8% in 1957. If account is taken of the real number of workers who are jobless throughout the year and the lower earnings of the skilled women workers, we would see that even in the fifties, when the economic level was relatively high (largely due to military production), the earnings of approximately 80 to 85% of all the skilled workers were below the Heller budget. As for semi-skilled and unskilled workers, the earnings of 94 to 96% and 99% respectively, were below the Heller budget in the 1950's, taking into consideration those unemployed the entire year.

One of the most important results of the decline in the payment for skilled labor in the United States in the epoch of the general crisis of capitalism lies in the big gap which has developed between the statistical concept of “skilled worker” and the concept of “well paid worker.” Only less than one-sixth of the skilled labor force (or about 6 to 7% of all the workers) still has comparatively high earnings. The remaining five-sixths have been reduced in one way or other to the level of subsistence of the main mass of the workers.

***

The position of the skilled worker has deteriorated not only through the decline in the volume of relatively high-paid skilled labor, but also because of a considerable reduction in the pay of trained workers as compared with the payment received by the untrained workers. Unfortunately, US statistics have not worked out any information on the real annual earnings of workers of varying skills. Only such information would make it possible to draw a general picture of the deteriorating position of the skilled workers. The available information on hourly rates of payment cannot reveal the changes in the real position of specific strata of the working class; in particular, it does not at all reflect such very important factors as changes in the actual annual labor time, the burden of total unemployment, etc. Nevertheless, it is quite obvious that the hourly rates of payment for skilled labor show a tendency to fall as compared with the rates paid to the main mass of the workers. This is added proof that the economic position of the labor aristocracy is being shattered. A general idea of the changes in the hourly earnings of skilled workers as compared with the earnings of the unskilled workers is afforded by the following table, which is based on data from a number of surveys conducted by the Bureau of Labor Statistics (see Table 5).

Table 5

Hourly Earnings of Skilled Workers of Different
Trades in the Manufacturing Industries
(Earnings of unskilled workers taken as 100)*

Years	Median index (for all industries	Range of quarterly indices for specific industries
1907	205	180-280
1918-1919	175	150-225
1931-1932	180	160-220
1937-1940	165	150-190
1945-1947	155	145-170
1952-1953	137	130-155
1955-1956	138	131-156

* Compiled on the basis of the Monthly Labor view, August, 1958, p. 130 and November,19 p. 1171; “Wages and Related Benefits, 20 La Markets, 1952–53,” BLS Bull. No. 1116; “Wages and Related Benefits, 17 Labor Markets, 1955-56,” BLS Bull. No. 1188.

Hourly earnings of cleaners, as the most wi spread and low-paid category of unskilled m workers, taken as 100.

In view of the fragmentary and heterogeneous nature of the primary data of the Bureau of Labor Statistics on the hourly earnings of specific groups of workers in different industries, and also owing to the lack of information on the proportion of each of these groups, it is impossible for the given period to construct a composite average index of the extent to which payment for skilled labor was in excess of payment for unskilled labor in the manufacturing industries. However, the changes in the median index for the payment to skilled workers (i.e., the average between the minimum and maximum) in all industries, as well as the movement of the entire scale of quarterly indices (i.e., average indices for the lower and higher quarters of the statistical series) for specific industries, are quite indicative. Between the first decade of this century and the mid-fifties, the median prevalence of the earnings (in a unit of time) of the skilled workers over those of the unskilled workers dropped 2.8 times — from 105 to 38%! And characteristically enough, the minimu quarterly excess in specific branches of producti dropped from 80% to 31% (2.6 times), while the maximum quarterly prevalence dropped from 18 56% (3.2 times). As is evident, along with a sign cant general drop in the payment to trained work there has been a particularly significant reductio in the high earnings of the skilled workers as co pared with the earnings of the unskilled workers A high-paid skilled worker could earn in 1907 in unit of time at least 2.8 times the amount earned an untrained worker, while in 1955-1956 his earn ings were only 56% above the payment for unskil labor.

Along with the fragmentary indices given abov the following indices are available for the avera hourly earnings of skilled, semi-skilled and unskilled male workers in 25 leading branches of t manufacturing industry (see Table 6 on the follo page).

It should be noted that the figures given in thi table do not take into account the changes in act labor time and are therefore suitable only for m tual comparisons. Inasmuch as the first series

Table 6*

Years	Skilled and semi-skilled workers	Hourly earnings (in dollars)	
		Unskilled workers	Skilled and semi-skilled workers as % of earnings of unskilled workers**
1914 (July)	0.291	0.203	143
1929	0.668	0.486	137
1937	0.777	0.570	136
1943	1.164	0.854	136
1945	1.248	0.917	136
1946	1.320	1.015	130
1947	1.478	1.147	129
1948	1.567	1.227	127

* Based on The Economic Almanac, 1949, p. 206; 1951-1952, p. 274. Average monthly data are presented for all years except 1920 and 1948 (average for 7 months) and 1922 (average for six months). Compilation of these statistical series discontinued beginning with 1948. They were prepared by the National Council of the Industrial Conference (an organization of the biggest industrial monopolies).

** Our own calculations are presented here.

able generalizes information relating to a small ion of skilled workers and a broad mass of i-skilled workers, the difference between the nent for the labor of this combined group and the nent for the labor of unskilled workers seems n smaller than in the preceding table, where a nct division is drawn between the labor of the ed and unskilled workers. Still, even from this there is a very clear tendency towards a con- rable decline in the difference between the pay- : for skilled and unskilled labor.

r a full picture let us look at the construction stry where mechanization of labor was developing to a lesser extent than in the manufacturing industries. Under the pressure of growing mass chronic unemployment in the construction industry, which for a long time has been a kind of stronghold of the organized and well paid trained workers, payment for skilled labor has been reduced considerably as compared with payment for unskilled labor. This may be seen from the index which gives in percentage terms the relationship between the hourly wages established by a collective agreement for skilled workers and the hourly rates for helpers and unskilled laborers (see Table 7).

***

Table 7*

Years	Indices	Years	Indices	Years	Indices
1907	198	1943	170	1952	147
1913	210	1945	165	1953	145
1920	177	1946	157	1954	144
1925	193	1947	153	1955	142
1929	181	1948	150	1956	140
1932	191	1949	150	1957	139
1937	183	1950	149	1958	139
1939	181	1951	148		

* Calculated from data in "Union Wages and Hours: Building Trades," July, 1958, BLS Bull. No. 1245.

On the eve of the First World War, average hourly rates paid to skilled workers under collective agreements were more than double the average rates paid to helpers and unskilled laborers. Payment for skilled labor began to decline in the years that followed. In the late 1950's the average rate paid to skilled construction workers was above the average paid to helpers and unskilled workers by not much more than one-third. The drop in wages of the unorganized trained workers was even more significant.

The relative drop in the level of payment to skilled workers is explained by three main causes. It reflects in part a reduction in the duration of training as the result of technical improvements and simplification of production operations. If a skilled worker requires two years of training instead of four years of training previously required for turning out the same production, the value and price of his labor power is bound to decline, other conditions being equal, although he still remains a skilled worker. What we have here is a relative decline, for the absolute value of his labor power can rise chiefly in connection with the increase in the intensity of labor.

Second, the fact is that the spread of mass chronic unemployment among the skilled workers sharply worsens the conditions of sale of skilled labor power in the labor market and heightens the pressure of competition upon the wages of the employed skilled workers.

We suggest, finally, that the lessening of the difference between the price of skilled and unskilled labor power is explained by the spread of education, which leads to an increase in the supply of trained labor power and to a lowering of the price in the labor market. The adaptation of public education in general, and of vocational training in particular, to the requirements of industry has played a definite role, has reduced the cost of training skilled workers and has thus brought about a relative decline in the cost and, in the final analysis, the price of labor power, i.e., in wages. The specific nature of this relative decline in the cost of the labor power of the skilled workers lies in the fact that the expenditures on the cultural and technical education of workers have been shifted largely to the state treasury, i.e., they are covered partly by the taxes exacted from the working people, and also from the capitalists who are not directly exploiting the given workers. The industrial capitalist, paying the comparatively small part of taxes which is his portion, does not in the least reimburse the worker for the expenditures on his general cultural and technical education which were formerly included directly in the cost of labor power. Consequently, on the one hand a considerable share of the expenditures on the cultural and technical education of skilled wor ers is shifted on to the shoulders of the working p ple by means of taxation and, on the other hand, th wages of the skilled workers are reduced on this basis.

Inasmuch as the difference between the payment to trained workers and the payment to untrained workers has greatly diminished, skilled labor is gradually ceasing to be the economic basis of the labor aristocracy, and the class solidarity of all strata of the working class is growing steadily.

It should be emphasized that despite the assertions of the bourgeois apologists that automation brings higher wages to the American workers quit the contrary is the case. In spite of the existence of a big and influential trade union in the automobi and aircraft industries, the Ford Company carrie through a general cut in wage scales when it open its new automated plant in Cleveland. The trade union has established that "average hourly rates f production workers at the Cleveland plant were about 11 cents an hour less than at Dearborn. The were three reasons for this:

"1. Rates for similar classifications, generally were 4 1/2 cents an hour lower, for the most part at Cleveland.

"2. Where there was a rate change for a job, Cleveland plant workers were at the bottom of the range, Dearborn employees at the top.

"3. Similar work was classified differently at both plants. Where a job was on the borderline b tween two classifications at the Cleveland plant, th company had classified the worker in the lower p ing classification. At Dearborn, the worker in a similar situation was placed in the higher paid classification." (13)

Although because of this the workers voted to declare a strike, the trade union obtained only pa tial concessions from the management; the reduc tion in wages at the automated plant remained par in effect.

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The decline in the number of highly-paid, traine workers, along with a considerable relative reduc tion in the payment for the labor of the trained worker and a lowering of the wage of the semi-skilled worker almost to the level of the untraine worker, reveals one of the very important aspect of the absolute impoverishment of the proletaria population in the richest country of the capitalist world. At the same time, the decline in the socia weight of the labor aristocracy in the conditions the present development of American monopoly capitalism represents a very significant phenome non.

anges in the mechanism of capitalist exploita- have led to this, that although crumbs from the profits are allocated by the financial oligarchy efore, or even in greater amounts, for the pur- of corrupting the labor movement, these hand- do not reach the skilled strata of the industrial kers in the former amounts.

wo consequences follow from this change. That al phenomenon of monopoly capitalism about h Lenin spoke in his time, namely, the bribery "fairly considerable minority" of workers, the tion of a certain degree of a "considerable tum" of well-paid workers, becomes greatly ted with the development of the general crisis apitalism even in the largest imperialist coun- s. And since the financial oligarchy continues to a certain share of its high profits for spreading rtunism and servility to capital, along with the ction of the stratum of trained workers bribes extended on a greater scale to the narrow sec- of the trade union and political bureaucracy in labor movement. The more the ranks of the in- rial labor aristocracy diminish as a social tum of the proletariat, the greater are the mbs received from maximum profits by com- tively more narrow circles of the bureaucracy e labor movement, which grows rich and "pros-" owing to this (very highly paid trade union ers, members of the municipal councils and e legislative assemblies, directors of the pen- funds, etc.). At the same time this bureaucracy creasingly losing its former mainstay in the king class and is being transformed to an in- sing extent into a mere agent of the big bour- sie, isolated from the material conditions of life e working population. Along with the deteriora- of the conditions of the main mass of the work- the labor bureaucracy is gradually coalescing the employers and the state apparatus, and is eiving an increasing number of "soft jobs." The cial support given to the reformist bureaucracy e economic and political organs of the big mo- lists is increasing significantly. This process me particularly apparent in the 1930's in all the erialist countries and it has become even nger since the Second World War.

e bribery of the labor aristocracy by the big geoisie is removed from the sphere of produc- to the comparatively limited sphere of political uption. What we have therefore is, on the one , a considerable increase in social homogeneity, consequently, a strengthening of the class soli- ty of the different strata of the proletariat, and, e other hand, a weakning of the position of the r aristocracy.

e weakened position of the labor aristocracy in the main branches of large-scale industry in the USA greatly facilitated the influx of millions of workers into trade unions in the second half of the 1930's. Then the Congress of Industrial Organizations emerged. The American Federation of Labor, which for more than half a century adhered to the principles of limited craft unionism, developed into a mass trade-union organization, having opened its doors to the semi-skilled and unskilled workers.

In the 1940's and 1950's the position of the workers improved somewhat in comparison with the 1930's as a result of the considerable growth of industrial production. This enabled the reformist trade union leaders to take a long step to the right. But even in these conditions the weakened position of the labor aristocracy led to a considerable strengthening of the fighting capacity of the trade unions. Proof of this is contained in the contradiction, which is characteristic of our time, between the reactionary, pro-capitalist position of the right-wing leaders of the AFL-CIO and the selfless strike action of the American workers. Only the militancy of the organized workers explains, for example, the fact that during the recent strike of 500,000 metal workers, which lasted 3 1/2 months, the reactionary trade union leaders did not dare to break the strike in spite of the very strong pressure brought to bear by the monopolies, because the surge of the workers' discontent threatened to sweep them away. This characteristic, highly promising feature of the labor movement in the USA today is determined primarily by the weakened position of the labor aristocracy.

Footnotes

(1) H. Dewey Anderson and Percy E. Davidson, Recent Occupational Trends in American Labor, (Stanford University Press), 1945, p. 62.

(2) ibid., p. 52.

(3) Hearings Before the Temporary National Economic Committee, 76th Congress, 3rd Session, "Technology and Concentration of Economic Power," Statement of R. J. Thomas, President, United Auto Workers, p. 16372.

(4) Charles R. Walker and Robert H. Guest, The Man on The Assembly Line (Cambridge: Harvard University Press, 1952), pp. 42, 51-52.

(5) James R. Bright, Automation and Management (Boston Graduate School of Business, Harvard University, 1958, p. 181).

(6) "Adjustments to Automation in Two Forms," Monthly Labor Review, January, 1956, p. 16.

(7) Bright, op. cit., pp. 176-177, 182.

(8) The authors of the official British report on automation processes write: "As automation

spreads, the labor force in industries using it will contain fewer operations and more managers, technicians and craftsmen concerned with building and servicing automatic equipment than it does today.” Characteristically enough, according to the information given in this British report, after an automatic continuous strip mill was put into operation the number of skilled workers occupied with operation and maintenance of equipment has grown from 4 to 10%, but the skilled labor force as a whole dropped from 19 to 17%, while the number of semi-skilled workers has grown from 55 to 62%, unskilled workers — from 12 to 15%, and the number of apprentices has dropped from 14 to 6%. As for the executive, engineering and technical personnel and office clerks, their number has grown from 10 to 14% of the total labor force. (Department of Scientific and Industrial Research, “Automation,” London, 1956 p. 67.)

(9) See US Census of Population, 1950, “Occupational Characteristics,” Table 23.

(10) In consideration of the fact that 5.1% of fu employed skilled workers, 3% of the semi-skille and 1.2% of the unskilled workers had an annual earning of $4,000-$4,162 in 1949.

(11) These figures represent the arithmetical mean of the budgets for workers’ families which rent homes or buy them on an installment plan.

(12) “Current Population Reports,” Series P-60.

(13) Ken Bannon and Nelson Samp, “Impact of Automation on Ford-UAW Relationships,” Monthl Labor Review, June, 1958, p. 612.

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